

PREPUBLICATION COPY NOTICE:

The EPA Administrator signed the following final rule on **March 31, 2008**.

This is a prepublication version of the final rule that EPA is submitting for publication in the *Federal Register*. While the Agency has taken steps to ensure the accuracy of this Internet version of the final rule, it's not the official version of the final rule for purposes of judicial review. Please refer to the official version of the final rule that will appear in a forthcoming *Federal Register* publication, which is currently expected to occur in the week of April 7, 2008.

Once the official version of the final rule publishes in the *Federal Register*, this advance publication version of the final rule will be replaced with a link to the final rule that appears in the *Federal Register* publication. At that time, you will also be able to access the on-line docket for this rulemaking at <http://www.regulations.gov>. You can then use EPA's electronic docket and comment system at www.regulations.gov, to access the index listing of the contents of the docket, and to access those documents in the docket that are available electronically. The docket number for this rulemaking is **EPA-HQ-OPPT-2005-0049**.

For additional information about lead and lead hazards, go to <http://www.epa.gov/lead/>. You can speak to an information specialist by contacting [The National Lead Information Center \(NLIC\)](http://www.epa.gov/lead/pubs/nlic.htm) at **1-800-424-LEAD (5323)** (see also <http://www.epa.gov/lead/pubs/nlic.htm>).

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 745

[EPA–HQ–OPPT–2005–0049; FRL–8355–7]

RIN 2070–AC83

Lead; Renovation, Repair, and Painting Program

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is issuing a final rule under the authority of section 402(c)(3) of the Toxic Substances Control Act (TSCA) to address lead-based paint hazards created by renovation, repair, and painting activities that disturb lead-based paint in target housing and child-occupied facilities. “Target housing” is defined in TSCA section 401 as any housing constructed before 1978, except housing for the elderly or persons with disabilities (unless any child under age 6 resides or is expected to reside in such housing) or any 0-bedroom dwelling. Under this rule, a child-occupied facility is a building, or a portion of a building, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least two different days within any week (Sunday through Saturday period), provided that each day’s visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may be located in public or commercial buildings or in target housing. This rule establishes requirements for training renovators, other renovation workers, and dust sampling technicians; for certifying renovators, dust sampling technicians, and renovation firms; for accrediting providers of renovation and dust sampling technician training; for renovation work practices; and for recordkeeping. Interested States, Territories, and Indian Tribes may apply for and receive authorization to administer and enforce all of the elements of these new renovation requirements.

DATES: This final rule is effective [*insert date 60 days after date of publication in the Federal Register*].

ADDRESSES: EPA has established a docket for this action under docket identification (ID) number EPA–HQ–OPPT–2005–0049. All documents in the docket are listed in the docket index available in [regulations.gov](http://www.regulations.gov). To access the electronic docket, go to <http://www.regulations.gov>, select “Advanced Search,” then “Docket Search.” Insert the docket ID number where indicated and select the “Submit” button. Follow the instructions on the [regulations.gov](http://www.regulations.gov) website to view the docket index or access available documents. 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. Publicly available docket materials are available electronically at <http://www.regulations.gov>, or, if only available in hard copy, at the OPPT Docket. The OPPT Docket is located in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA West Bldg., 1301 Constitution Ave., NW., Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566-1744, and the telephone number for the OPPT Docket is (202) 566-0280. Docket visitors are required to show photographic identification, pass through a metal detector, and sign the EPA visitor log. All visitor bags are processed through an X-ray machine and subject to search. Visitors will be provided an EPA/DC badge that must be visible at all times in the building and returned upon departure.

FOR FURTHER INFORMATION CONTACT: *For general information contact:* Colby Lintner, Regulatory Coordinator, Environmental Assistance Division (7408M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: (202) 554-1404; e-mail address: TSCA-Hotline@epa.gov.

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SUPPLEMENTARY INFORMATION:

I. Does this Action Apply to Me?

You may be potentially affected by this action if you perform renovations of target housing or child-occupied facilities for compensation or dust sampling. "Target housing" is defined in section 401 of TSCA as any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child under age 6 resides or is expected to reside in such housing) or any 0-bedroom dwelling. Under this rule, a child-occupied facility is a building, or a portion of a building, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least 2 different days within any week (Sunday through Saturday period), provided that each day's visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may be located in public or commercial buildings or in target housing. Potentially affected entities may include, but are not limited to:

- Building construction (NAICS code 236), e.g., single family housing construction, multi-family housing construction, residential remodelers.
- Specialty trade contractors (NAICS code 238), e.g., plumbing, heating, and air-conditioning contractors, painting and wall covering contractors, electrical contractors, finish carpentry contractors, drywall and insulation contractors, siding contractors, tile and terrazzo contractors, glass and glazing contractors.
- Real estate (NAICS code 531), e.g., lessors of residential buildings and dwellings, residential property managers.
- Child day care services (NAICS code 624410).
- Elementary and secondary schools (NAICS code 611110), e.g., elementary schools with kindergarten classrooms.
- Other technical and trade schools (NAICS code 611519), e.g., training providers.
- Engineering services (NAICS code 541330) and building inspection services (NAICS code 541350), e.g., dust sampling technicians.

This listing is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities not listed in this unit could also be affected. The North American Industrial Classification System (NAICS) codes have been provided to assist you and others in determining whether this action might apply to certain entities. To determine whether you or your business may be affected by this action, you should carefully examine the applicability provisions in Unit III. If you have any questions regarding the applicability of this action to a particular entity, consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

II. Background

A. What Action is the Agency Taking?

EPA is issuing a final rule under the authority of section 402(c)(3) of the Toxic Substances Control Act (TSCA) to address lead-based paint hazards created by renovation, repair, and painting activities (hereinafter also referred to as renovation activities or renovation projects) that disturb lead-based paint in target housing and child-occupied facilities. “Target housing” is defined in TSCA section 401 as any housing constructed before 1978, except housing for the elderly or persons with disabilities (unless any child under age 6 resides or is expected to reside in such housing) or any 0-bedroom dwelling. Under this rule, a child-occupied facility is a building, or a portion of a building, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least two different days within any

week (Sunday through Saturday period), provided that each day's visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may be located in public or commercial buildings or in target housing. This rule establishes requirements for training renovators, other renovation workers, and dust sampling technicians; for certifying renovators, dust sampling technicians, and renovation firms; for accrediting providers of renovation and dust sampling technician training; for renovation work practices; and for recordkeeping. Interested States, Territories, and Indian Tribes may apply for and receive authorization to administer and enforce all of the elements of these new renovation requirements.

1. *Information on lead and its health effects.* Lead is a soft, bluish metallic chemical element mined from rock and found in its natural state all over the world. Lead is virtually indestructible, is persistent, and has been known since antiquity for its adaptability in making various useful items. In modern times, it has been used to manufacture many different products, including paint, batteries, pipes, solder, pottery, and gasoline. Through the 1940's, paint manufacturers frequently used lead as a primary ingredient in many oil-based interior and exterior house paints. Usage gradually decreased through the 1950's and 1960's as titanium dioxide replaced lead and as latex paints became more widely available.

Lead has been demonstrated to exert "a broad array of deleterious effects on multiple organ systems via widely diverse mechanisms of action." This array of health effects, the evidence for which is comprehensively described in EPA's Air Quality Criteria for Lead document (Ref. 1), includes heme biosynthesis and related functions; neurological development and function; reproduction and physical development; kidney function; cardiovascular function; and immune function. There is also some evidence of lead carcinogenicity, primarily from animal studies, together with limited human evidence of suggestive associations.

Of particular interest for present purposes is the delineation of lowest observed effect levels for those lead-induced effects that are most clearly associated with blood lead less 10 $\mu\text{g}/\text{dL}$ in children and/or adults and are, therefore, of greatest public health concern (Ref. 1, at 8-60). As evident from the Criteria Document, neurotoxic effects in children and cardiovascular effects in adults are among those best substantiated as occurring at blood-lead concentrations as low as 5 to 10 $\mu\text{g}/\text{dL}$ (or possibly lower); and these categories of effects are currently clearly of greatest public health concern. Other newly demonstrated immune and renal system effects among general population groups are also emerging as low-level lead-exposure effects of potential public health concern. (Ref. 1, at 8-60)

The overall weight of the available evidence provides clear substantiation of neurocognitive decrements being associated in young children with blood lead concentrations in the range of 5–10 micrograms per deciliter ($\mu\text{g}/\text{dL}$), and possibly somewhat lower. Some newly available analyses appear to show lead effects on the intellectual attainment of preschool and school age children at population mean concurrent blood-lead levels ranging down to as low as 2 to 8 $\mu\text{g}/\text{dL}$. A decline of 6.2 points in full scale IQ for an increase in concurrent blood lead levels from 1 to 10 $\mu\text{g}/\text{dL}$ has been estimated, based on a pooled analysis of results derived from seven well-conducted prospective epidemiologic studies (Ref. 1, at E-9).

Epidemiologic studies have consistently demonstrated associations between lead exposure and enhanced risk of deleterious cardiovascular outcomes, including increased blood pressure and incidence of hypertension. A meta-analysis of numerous studies estimates that a doubling of blood lead level (e.g., from 5 to 10 $\mu\text{g}/\text{dL}$) is associated with ~ 1.0 mm Hg increase in systolic blood pressure and ~ 0.6 mm Hg increase in diastolic pressure. (Ref. 1, at E-10).

Both epidemiologic and toxicologic studies have shown that environmentally relevant levels of lead affect many different organ systems. (Ref 1. at E-8). Please see Ref. 1 for further information.

The nervous system has long been recognized as a target of lead toxicity, with the developing nervous system affected at lower exposures than the mature system. While blood lead levels in U.S. children ages 1 to 5 years have decreased notably since the late 1970's, newer studies have investigated and reported associations of effects on the neurodevelopment of children at population mean concurrent blood lead levels ranging down to as low as 2 to 8 $\mu\text{g}/\text{dL}$ (Ref. 1, at E-9). Functional manifestations of lead neurotoxicity during childhood include sensory, motor, cognitive and behavioral impacts. Investigating associations between lead exposure and behavior, mood, and social conduct of children has been an emerging area of research (see Ref. 1 at 6.2.6). Early studies indicated linkages between lower-level lead toxicity and behavioral problems (e.g., aggression, attentional problems, and hyperactivity) in children.

Effects of lead on neurobehavior have been reported with remarkable consistency across numerous studies of various designs, populations studied, and developmental assessment protocols. The negative impact of lead on IQ and other neurobehavioral outcomes persist in most recent studies following adjustment for numerous confounding factors including social class, quality of caregiving, and parental intelligence. Moreover, these effects appear to persist into adolescence and young adulthood in the absence of marked reductions in environmental exposure to lead. Cognitive effects associated with lead exposures that have been observed include decrements in intelligence test results, such as the widely used IQ score, and in

academic achievement as assessed by various standardized tests as well as by class ranking and graduation rates. Associations between lead exposure and academic achievement observed in the above-noted studies were significant even after adjusting for IQ, suggesting that lead-sensitive neuropsychological processing and learning factors not reflected by global intelligence indices might contribute to reduced performance on academic tasks (Ref. 1, at 6–76).

Other cognitive effects observed in studies of children have included effects on attention, executive functions, language, memory, learning and visuospatial processing with attention and executive function effects observed. The evidence for the role of lead in this suite of effects includes experimental animal findings. These animal toxicology findings provide strong biological plausibility in support of the concept that lead may impact one or more of these specific cognitive functions in humans (Ref. 1, at 8–30). Further, lead-induced deficits observed in animal and epidemiological studies, for the most part, have been found to be persistent in the absence of markedly reduced environmental exposures. It is additionally important to note that there may be long-term consequences of such deficits over a lifetime. Studies examining aspects of academic achievement related to lead exposure indicate the association of deficits in academic skills and performance, which in turn lead to enduring and important effects on objective parameters of success in real life (Ref. 1 at 6-76).

Lead bioaccumulates, and is only slowly removed, with bone lead serving as a blood lead source for years after exposure and may serve as a significant source of exposure. Bone accounts for more than 90% of the total body burden of lead in adults and 70% in children (Ref. 1, at 4–42). In comparison to adults, bone mineral turns over much more quickly in children as a result of growth. Changes in blood lead concentration in children are thought to parallel more closely to changes in total body burden. Therefore, blood lead concentration is often used in epidemiologic and toxicological studies as an index of exposure and body burden for children.

Paint that contains lead can pose a health threat through various routes of exposure. House dust is the most common exposure pathway through which children are exposed to lead-based paint hazards. Dust created during normal lead-based paint wear (especially around windows and doors) can create an invisible film over surfaces in a house. Children, particularly younger children, are at risk for high exposures of lead-based paint dust via hand-to-mouth exposure, and may also ingest lead-based paint chips from flaking paint on walls, windows, and doors. Lead from exterior house paint can flake off or leach into the soil around the outside of a home, contaminating children's play areas. Cleaning and renovation activities may actually increase the threat of lead-based paint exposure by dispersing lead dust particles in the air and over accessible household surfaces. In turn, both adults and children can receive hazardous exposures by inhaling the

dust or by ingesting lead-based paint dust during hand-to-mouth activities.

2. *Statutory and regulatory background.* In 1992, Congress found that low-level lead poisoning was widespread among American children, affecting, at that time, as many as 3,000,000 children under age 6; that the ingestion of household dust containing lead from deteriorating or abraded lead-based paint was the most common cause of lead poisoning in children; and that the health and development of children living in as many as 3,800,000 American homes was endangered by chipping or peeling lead paint, or excessive amounts of lead-contaminated dust in their homes. Congress further determined that the prior Federal response to this threat was insufficient and enacted Title X of the Housing and Community Development Act of 1992, Public Law 102–550 (also known as the Residential Lead-Based Paint Hazard Reduction Act of 1992) (“the Act” or “Title X”). Title X established a national goal of eliminating lead-based paint hazards in housing as expeditiously as possible and provided a leadership role for the Federal government in building the infrastructure necessary to achieve this goal.

Subsequently, President Clinton created the President’s Task Force on Environmental Health Risks and Safety Risks to Children. Co-chaired by the Secretary of the Department of Health and Human Services (HHS) and the Administrator of EPA, the Task Force consisted of representatives from 16 Federal departments and agencies. The Task Force set a Federal goal of eliminating childhood lead poisoning by the year 2010 (Ref. 2). In October 2001, President Bush extended the work of the Task Force for an additional 18 months beyond its original charter. Reducing lead poisoning in children was the Task Force’s top priority. Although more work remains to be done, significant progress has been made towards reducing lead poisoning in children. The estimated percentage of children with blood lead levels above the CDC level of concern declined from 4.4% between 1991 and 1994 to 1.6% between 2003 and 2004. More information on Federal efforts to address lead poisoning, including the responsibilities of EPA and other Federal Agencies under Title X, can be found in Units III.A. and III.B. of the preamble to the 2006 Lead; Renovation, Repair, and Painting Program Proposed Rule (“2006 Proposal”) (Ref. 3).

The Act added a new title to TSCA entitled “Title IV–Lead Exposure Reduction.” Most of EPA’s responsibilities for addressing lead-based paint hazards can be found in this title, with section 402 of TSCA being one source of the rulemaking authority to carry out these responsibilities. TSCA section 402(a) directs EPA to promulgate regulations covering lead-based paint activities to ensure persons performing these activities are properly trained, that training programs are accredited, and that contractors performing these activities are certified. These regulations must contain standards for performing lead-based paint activities, taking into account reliability, effectiveness, and

safety. On August 29, 1996, EPA promulgated final regulations under TSCA section 402(a) that govern lead-based paint inspections, lead hazard screens, risk assessments, and abatements in target housing and child-occupied facilities (also referred to as the Lead-based Paint Activities Regulations). These regulations, codified at 40 CFR part 745, subpart L, contain an accreditation program for training providers and training and certification requirements for lead-based paint inspectors, risk assessors, project designers, abatement supervisors, and abatement workers. Work practice standards for lead-based paint activities are included. Pursuant to TSCA section 404, provision was made for interested States, Territories, and Indian Tribes to apply for and receive authorization to administer their own lead-based paint activities programs.

On June 9, 1999, the Lead-based Paint Activities Regulations were amended to include a fee schedule for training programs seeking EPA accreditation and for individuals and firms seeking EPA certification (Ref. 5). These fees were established as directed by TSCA section 402(a)(3), which requires EPA to recover the cost of administering and enforcing the lead-based paint activities requirements in unauthorized States. The most recent amendment to the Lead-based Paint Activities Regulations occurred on April 8, 2004, when notification requirements were added to help EPA monitor compliance with the training and certification provisions and the abatement work practice standards (Ref. 5).

Another of EPA's responsibilities under Title X is to require that purchasers and tenants of target housing and occupants of target housing undergoing renovation are provided information on lead-based paint and lead-based paint hazards. As directed by TSCA section 406(a), the Consumer Products Safety Commission (CPSC), the Department of Housing and Urban Development (HUD), and EPA, in consultation with the Centers for Disease Control and Prevention (CDC), jointly developed a lead hazard information pamphlet entitled *Protect Your Family From Lead in Your Home* ("PYF") (Ref. 7). This pamphlet was designed to be distributed as part of the disclosure requirements of section 1018 of Title X and TSCA section 406(b), to provide home purchasers, renters, owners, and occupants with the information necessary to allow them to make informed choices when selecting housing to buy or rent, or deciding on home renovation projects. The pamphlet contains information on the health effects of lead, how exposure can occur, and steps that can be taken to reduce or eliminate the risk of exposure during various activities in the home.

TSCA section 406(b) directs EPA to promulgate regulations requiring persons who perform renovations for compensation in target housing to provide a lead hazard information pamphlet to owners and occupants of the home being renovated. These regulations, promulgated on June 1, 1998, are codified at 40 CFR part 745, subpart E (Ref. 8). The term "renovation" is not defined in the statute, but the regulation,

at 40 CFR 745.83, defines a “renovation” as the modification of any existing structure, or portion of a structure, that results in the disturbance of painted surfaces. The regulations specifically exclude lead-based paint abatement projects as well as small projects that disturb 2 square feet or less of painted surface per component, emergency projects, and renovations affecting components that have been found to be free of lead-based paint, as that term is defined in the regulations, by a certified inspector or risk assessor. These regulations require the renovation firm to document compliance with the requirement to provide the owner and the occupant with the PYF pamphlet. TSCA section 404 also allows States to apply for, and receive authorization to administer, the TSCA section 406(b) requirements.

TSCA section 403 directs EPA to promulgate regulations that identify, for the purposes of Title X and Title IV of TSCA, dangerous levels of lead in paint, dust, and soil. These regulations were promulgated on January 5, 2001, and codified at 40 CFR part 745, subpart D (Ref. 9). These hazard standards define lead-based paint hazards in target housing and child-occupied facilities as paint-lead, dust-lead, and soil-lead hazards. A paint-lead hazard is defined as any damaged or deteriorated lead-based paint, any chewable lead-based painted surface with evidence of teeth marks, or any lead-based paint on a friction surface if lead dust levels underneath the friction surface exceed the dust-lead hazard standards. A dust-lead hazard is surface dust that contains a mass-per-area concentration of lead equal to or exceeding 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) on floors or 250 $\mu\text{g}/\text{ft}^2$ on interior windowsills based on wipe samples. A soil-lead hazard is bare soil that contains total lead equal to or exceeding 400 parts per million ($\mu\text{g}/\text{g}$) in a play area or average of 1,200 $\mu\text{g}/\text{g}$ of bare soil in the rest of the yard based on soil samples.

TSCA section 402(c) addresses renovation and remodeling. For the stated purpose of reducing the risk of exposure to lead in connection with renovation and remodeling activities, section 402(c)(1) of TSCA requires EPA to promulgate and disseminate guidelines for the conduct of such activities that may create a risk of exposure to dangerous levels of lead. In response to this statutory directive, EPA developed the guidance document entitled *Reducing Lead Hazards when Remodeling Your Home* in consultation with industry and trade groups (Ref. 8). This document has been widely disseminated to renovation and remodeling stakeholders through the National Lead Information Center, EPA Regions, and EPA’s State and Tribal partners and is available at <http://www.epa.gov/lead/pubs/rrpamph.pdf>.

TSCA section 402(c)(2) directs EPA to study the extent to which persons engaged in various types of renovation and remodeling activities are exposed to lead during such activities or create a lead-based paint hazard regularly or occasionally. EPA conducted this study in four phases. Phase I, the Environmental Field Sampling Study (Ref.

11), evaluated the amount of leaded dust released by the following activities:

- Paint removal by abrasive sanding.
- Removal of large structures, including demolition of interior plaster walls.
- Window replacement.
- Carpet removal.
- HVAC repair or replacement, including duct work.
- Repairs resulting in isolated small surface disruptions, including drilling and sawing into wood and plaster.

Phase II, the Worker Characterization and Blood Lead Study (Ref. 12), involved collecting data on blood lead and renovation and remodeling activities from workers. Phase III, the Wisconsin Childhood Blood-Lead Study (Ref. 13.), was a retrospective study focused on assessing the relationship between renovation and remodeling activities and children's blood-lead levels. Phase IV, the Worker Characterization and Blood-Lead Study of R&R Workers Who Specialize in Renovations of Old or Historic Homes (Ref. 14), was similar to Phase II, but focused on individuals who worked primarily in old historic buildings. More information on the results of these peer-reviewed studies can be found in Unit III.C.1. of the preamble to the 2006 Proposal.

3. *Summary of 2006 Proposal.* TSCA section 402(c)(3) directs EPA to revise the Lead-based Paint Activities Regulations to apply to renovation or remodeling activities that create lead-based paint hazards. In the 2006 Proposal, EPA proposed to conclude that any renovation activity that disturbs lead-based paint can create significant amounts of leaded dust, that most activities created lead-based paint hazards, and that some activities can be reasonably anticipated to create lead-based paint hazards. Accordingly, on January 10, 2006, EPA issued a Notice of Proposed Rulemaking covering renovation performed for compensation in target housing (Ref. 3). The 2006 Proposal contained requirements designed to address lead-based paint hazards created by renovation, repair, and painting activities that disturb lead-based paint. The 2006 Proposal included requirements for training renovators, other renovation workers, and dust sampling technicians; for certifying renovators, dust sampling technicians, and renovation firms; for accrediting providers of renovation and dust sampling technician training; for renovation work practices; and for recordkeeping. The 2006 Proposal would have made the rule effective in two stages. Initially, the rule would have applied to all renovations for compensation performed in target housing where a child with an increased blood lead level resided and rental target housing built before 1960. The rule would also have applied to owner-occupied target housing built before

1960, unless the person performing the renovation obtained a statement signed by the owner-occupant that the renovation would occur in the owner's residence and that no child under age 6 resided there. As proposed, the rule would take effect 1 year later in all rental target housing built between 1960 and 1978 and owner-occupied target housing built between 1960 and 1978. EPA also proposed to allow interested States, Territories, and Indian Tribes the opportunity to apply for and receive authorization to administer and enforce all of the elements of the new renovation provisions.

4. *Summary of 2007 Supplemental Proposal.* EPA received approximately 250 comments on its 2006 Proposal. These comments came from a wide variety of commenters, including State and local governments, industry groups, advocacy groups, renovation contractors, training providers, and individuals. A significant number of these commenters observed that the proposal did not cover buildings where children under age 6 spend a great deal of time, such as day care centers and schools. Commenters noted that the risk posed to children from lead-based paint hazards in schools and day care centers is likely to be equal to, if not greater than, the risk posed from these hazards at home. These commenters suggested that EPA expand its proposal to include such places, and several suggested that EPA use the existing definition of "child-occupied facility" in 40 CFR 745.223 to define the expanded scope of coverage. EPA felt that these comments had merit, and, because adding child-occupied facilities was beyond the scope of the 2006 Proposal, an expansion of the 2006 Proposal was necessary to give this issue full and fair consideration. Accordingly, on June 5, 2007, EPA issued a Supplemental Notice of Proposed Rulemaking (2007 Supplemental Proposal) to add child-occupied facilities to the universe of buildings covered by the 2006 Proposal (Ref. 15).

EPA proposed to use the definition of "child-occupied facility" from 40 CFR 745.223 with some modifications to make it consistent with the statutory focus on children under age 6 and to better describe the applicability of the term in target housing and in public or commercial buildings. The 2007 Supplemental Proposal would apply all of the accreditation, training, certification, work practice, and recordkeeping requirements to renovations in child-occupied facilities in the same way that the requirements would apply to renovations in target housing. In addition, EPA proposed to extend the lead hazard information distribution requirements of the Pre-Renovation Education Rule, 40 CFR part 745, subpart E, to renovations in child-occupied facilities. Specifically, EPA proposed that persons performing renovations in child-occupied facilities in public or commercial buildings would have to provide a lead hazard information pamphlet to the owner of the building and to the proprietor of the child-occupied facility. In addition, general information about the renovation would have to be provided to parents and guardians of children under age 6 using the child-occupied facility. The 2007 Supplemental Proposal

further provided that a lead hazard information pamphlet would have to be provided to parents and guardians or made available upon request. EPA received 12 comments on its 2007 Supplemental Proposal.

5. *2007 Notice of Data Availability.* After the 2006 proposal, two new studies assessing hazards associated with renovation activities were completed. On March 16, 2007, EPA announced the availability of these new studies in the docket for this rulemaking (Ref. 16). EPA requested comment on how these studies might inform provisions of the final rule. EPA received nearly 100 comments in response to its notice. Comments specifically on the studies are discussed below. Comments on how the studies might affect the final rule are discussed along with the provisions of the final rule in Unit III.E. of this preamble.

a. Characterization of Dust Lead Levels after Renovation, Repair, and Painting Activities. EPA conducted a field study (Characterization of Dust Lead Levels after Renovation, Repair, and Painting Activities) (the “Dust Study”) to characterize dust lead levels resulting from various renovation, repair, and painting activities (Ref. 17). This study, completed in January 2007, was designed to compare environmental lead levels at appropriate stages after various types of renovation, repair, and painting preparation activities were performed on the interiors and exteriors of target housing units and child-occupied facilities. All of the jobs disturbed more than 2 square feet of lead-based paint, so they would not have been eligible for the minor maintenance exception from the 2006 Proposal. The renovation activities were conducted by local professional renovation firms, using personnel who received lead safe work practices training using the curriculum developed by EPA and HUD, “Lead Safety for Remodeling, Repair, and Painting” (Ref. 18). The activities conducted represented a range of activities that would be permitted under the 2006 Proposal, including work practices that are restricted or prohibited for abatements under 40 CFR 745.227(e)(6). Of particular interest was the impact of using specific work practices that renovation firms would be required to use under the proposed rule, such as the use of plastic to contain the work area and a multi-step cleaning protocol, as opposed to more typical work practices.

The design of the Dust Study was peer-reviewed by experts in fields related to the study. They reviewed the design and quality assurance plan independently and provided written comments to EPA. The results of this peer-review are summarized in Unit 2 of the Dust Study report (Ref. 17). In addition, the record of this peer-review, which includes the comments from the reviewers and EPA’s responses, has been placed into the public docket for this action.

In the Dust Study, 12 different interior and 12 different exterior renovation activities were performed at 7 vacant target housing units in Columbus, Ohio, and 8 vacant target housing units (including four apartments) in Pittsburgh, Pennsylvania. Three different interior and three different exterior renovation activities were conducted at a

building representing a child-occupied facility, a vacant school in Columbus. The presence of lead-based paint was confirmed by laboratory analysis before a building was assigned a particular renovation activity or set of activities. Before interior renovation activities were performed, the floors and windowsills in the work area and adjacent rooms were cleaned. In most cases, pre-work cleaning resulted in dust lead levels on floors of less than 10 $\mu\text{g}/\text{ft}^2$; nearly all floors were less than 40 $\mu\text{g}/\text{ft}^2$ before work started. Most windowsills that would be used for later sampling were cleaned to dust lead levels less than 250 $\mu\text{g}/\text{ft}^2$. In the few cases where that level was not achieved on a windowsill needed for sampling, dust collection trays were used. Interior renovation activities included the following jobs:

- Making cut-outs in the walls.
- Replacing a window from the inside.
- Removing paint with a high temperature (greater than 1100 degrees Fahrenheit) heat gun.
- Removing paint with a low temperature (less than 1100 degrees Fahrenheit) heat gun.
- Removing paint by dry scraping.
- Removing kitchen cabinets.
- Removing paint with a power planer.

To illustrate the impact of the containment plastic and the specialized cleaning and cleaning verification protocol that would be required by the 2006 Proposal, each activity was performed a minimum of four times:

(1) With the plastic containment described in the 2006 Proposal followed by the cleaning protocol described in the proposal.

(2) With the plastic containment described in the 2006 Proposal followed by dry sweeping and vacuuming with a shop vacuum.

(3) With no plastic containment followed by the cleaning protocol described in the 2006 Proposal.

(4) With no plastic containment followed by dry sweeping and vacuuming with a shop vacuum.

Dust samples were collected after the renovation work was completed, after cleaning, and after cleaning verification. If a building was being used again for the same job under different work practices, or for a completely different job, the unit was recleaned and retested prior to starting the next job. All buildings were cleaned and tested after the last job.

Geometric mean post-work, pre-cleaning floor dust lead levels in the work room were as follows (in $\mu\text{g}/\text{ft}^2$):

- Cut-outs--422.
- Kitchen cabinet removal--958.
- Low temperature heat gun--2,080.
- Dry scraping--2,686.
- Window replacement--3,993.
- High temperature heat gun--7,737.
- Power planing--32,644.

Power planing is an activity very similar to power sanding in which a machine that operates at high speed generating large quantities of dust is used.

Where baseline practices, i.e., no containment, dry sweeping, and vacuuming with a shop vacuum, were used, the geometric mean post-job floor dust-lead levels in the work room were as follows (in $\mu\text{g}/\text{ft}^2$):

- Cut-outs--22.
- Kitchen cabinet removal--58.
- Low temperature heat gun--41.
- Dry scraping--66.
- Window replacement--135.
- High temperature heat gun--445.
- Power planing--450.

The package of proposed rule requirements, i.e., containment, specialized cleaning, and cleaning verification, resulted in the lowest geometric mean dust lead levels in the work room at the end of a job. These results were as follows (in $\mu\text{g}/\text{ft}^2$):

- Cut-outs--5.
- Kitchen cabinet removal--12.
- Low temperature heat gun--24.
- Dry scraping--30.
- Window replacement--33.
- High temperature heat gun--36.
- Power planing--148.

Windowsill sample results were similar; the geometric mean dust lead levels after renovation activities performed in accordance with the proposed rule exceeded 250 $\mu\text{g}/\text{ft}^2$ only where power planing or a high temperature heat gun were used. When baseline practices were used, the geometric mean dust lead levels on the windowsills exceeded 250 $\mu\text{g}/\text{ft}^2$ for kitchen cabinet removal, window replacement, high temperature heat gun use, and power planing.

Exterior renovation activities performed as part of the study included the following:

- Replacing a door and doorway.
- Replacing fascia boards, soffits, and other trim.
- Removing paint with a high temperature (greater than 1100 degrees Fahrenheit) heat gun.
- Removing paint with a low temperature (less than 1100 degrees Fahrenheit) heat gun.
- Removing paint by dry scraping.
- Removing paint with a needle gun.
- Removing paint with power sanding or grinding.
- Removing paint with a torch or open flame.

For the exterior jobs, plastic sheeting was placed on the ground to catch the debris and dust from the job, in accordance with the requirements of the proposed rule. Additional plastic sheeting was laid out beneath and beyond the “proposed rule” plastic. Trays to collect dust and debris were placed on top of and underneath the “proposed rule” plastic. Trays were also placed just outside of the “proposed rule” plastic to assess how far the dust was spreading. A vertical containment, as high as the work zone, was erected at the end of the additional plastic.

The use of the “proposed rule” plastic as a ground covering captured large amounts of leaded dust. For all job types except removing paint with a torch, there was a substantial difference between the amount of lead captured by the “proposed rule” plastic and the amount under the “proposed rule” plastic. Including both bulk debris and dust, geometric mean lead levels in exterior samples from the collection trays on top of the “proposed rule” plastic ranged from a low of 60,662 $\mu\text{g}/\text{ft}^2$ for the door replacement activity to a high of 7,216,358 $\mu\text{g}/\text{ft}^2$ for removing paint with a high temperature heat gun. Geometric mean lead levels from the collection trays under the “proposed rule” plastic ranged from a low of 32 $\mu\text{g}/\text{ft}^2$ for door replacement to 8,565 $\mu\text{g}/\text{ft}^2$ for removing paint with a torch.

This regulatory action was supported by the Dust Study discussed above. Therefore, EPA conducted a peer review in accordance with OMB's Final Information Quality Bulletin for Peer Review. EPA requested this review from the Clean Air Scientific Advisory Committee (CASAC) Lead Review Panel. The CASAC, which is comprised of seven members appointed by the EPA Administrator, was established under the Clean Air Act as an independent scientific advisory committee. The CASAC's comments on the Dust Study, along with EPA's responses, have been placed into the public docket for this action. More information on the CASAC consultation process, along with background documents, is available on EPA's website at <http://www.epa.gov/lead/pubs/casac.htm>.

According to the peer review report, the CASAC Panel found

. . .that the [Dust Study] was reasonably well-designed, considering the complexity of the problem, and that the report provided information not available from any other source. The study indicated that the rule cleaning procedures reduced the residual lead (Pb) remaining after a renovation more than did the baseline cleaning procedures. Another positive aspect of the Dust Study was that it described deviations from the protocol when they occurred.

The CASAC Panel also contended that the limited data from residential housing units and child-occupied facilities included in the Dust Study, most likely do not represent a statistically valid sample of housing at the national level. They noted that there are aspects of the study that would underestimate the levels of lead-loadings while other aspects of the study would overestimate the loadings. EPA agrees that the Dust Study is not nationally representative of all housing. EPA notes that there are several reasons why this is the case, including the fact that all of the housing studied was built during 1925 or earlier, and a large number of the floors were in poor condition. A major purpose of the Dust Study was to assess the proposed work practices. A statistically valid sample of housing at the national level is not needed to assess the work practices. If anything, the Dust Study is conservative with respect to the age of housing because it studied older houses and therefore is appropriate for assessing the effectiveness of the work practices.

In addition to the Dust Study which directly supported this regulatory action, several other studies are discussed throughout the preamble which may or may not have been peer reviewed.

b. Lead-Safe Work Practices Survey Project. The National Association of Home Builders (NAHB) conducted a survey that assessed renovation and remodeling activities to measure levels of lead dust generated by home improvement contractors (Ref. 19). The stated objective of this survey, completed in November 2006, was to measure the amount of lead dust generated during typical renovation and remodeling activities and assess whether routine renovation and

remodeling activities increased lead dust levels in the work area and on the property.

The activities evaluated during the survey were selected in consultation with remodeling contractors. NAHB believes that these activities represent the most common jobs performed by renovation and remodeling firms. The renovations were performed by professional renovation and remodeling contractors from each of the communities where the properties were located. All of the workers who participated in this project had previously attended and successfully completed the EPA/HUD curriculum for *Lead Safety for Remodeling, Repair, & Painting*.

According to the NAHB survey, an EPA-certified lead-based paint inspector confirmed the presence of lead-based paint in all of the properties considered for this survey. Previous inspection reports were consulted if the inspections conformed to the HUD Guidelines for lead-based paint inspections. Properties used in this survey included a single family home in Illinois, two single-family homes and a duplex in Connecticut, and an apartment above a storefront in Wisconsin.

The NAHB survey evaluated the following activities:

- Wall and ceiling removal (demolition).
- Wall and ceiling modification.
- Window and door removal and/or replacement (no sanding).
- Window and door alteration (no sanding).
- Sanding on windows and doors.
- Kitchen or bath cabinet removal.
- Baseboard and stair removal.
- Surface preparation (sanding).
- Sawing into wood and plaster.

Activities were performed in one of three ways: Using the work practices presented in the EPA/HUD curriculum, using modified work practices (one or more of the dust control or cleanup methods discussed in the EPA/HUD curriculum), or routine renovation practices.

Area air samples were collected before, during and after the work activity. Personal breathing zone air samples were collected during the work activity. Dust wipe samples were collected before work started and after final clean-up. Dust wipe samples were routinely collected from floors near the work activity and in some cases collected from a windowsill and/or window well.

In comparing the mean dust lead levels before the activities with the mean dust lead levels after the activities, the NAHB concluded that the renovation activities surveyed did not create new lead dust hazards overall. However, even after clean-up was conducted, over half of the 60 individual renovation activities studied resulted in an increase in dust lead levels on at least one surface. In most cases, the increase was considerably greater than the regulatory dust-lead hazard standard for that surface.

6. *Statutory finding and regulatory approach—TSCA section 402(c)(3) determination.* TSCA section 402(c)(3) directs EPA to revise the regulations issued under TSCA section 402(a), the Lead-based Paint Activities Regulations, to apply to renovation or remodeling activities that create lead-based paint hazards. EPA finds that renovation, repair, and painting activities that disturb lead-based paint create lead-based paint hazards. This finding is based upon EPA's Environmental Field Sampling Study and corroborated by the Dust Study and the NAHB survey (Refs. 11, 17, and 19).

In the 2006 Proposal, EPA proposed to conclude that any renovation activity that disturbs lead-based paint can create significant amounts of leaded dust, that most activities created lead-based paint hazards, and that some activities can be reasonably anticipated to create lead-based paint hazards. EPA's proposed conclusions were based upon the results of the Environmental Field Sampling Study, which examined, on a variety of components using a variety of tools and methods, activities that EPA had determined were representative of the paint-disturbing activities that typically occur during renovations. The activities were:

- Paint removal by abrasive sanding.
- Window replacement.
- HVAC duct work.
- Demolition of interior plaster walls.
- Drilling into wood.
- Drilling into plaster.
- Sawing into wood.
- Sawing into plaster.

Specifically, EPA proposed to conclude that all of the activities studied in the Environmental Field Sampling Study, with the exception of drilling into plaster, can create lead-based paint hazards. With respect to drilling into plaster, where lead-based paint is present, EPA proposed to conclude that this activity can reasonably be anticipated to create lead-based paint hazards. The Environmental Field Sampling

Study found that, with the exception of drilling into plaster, all renovation and remodeling activities, when conducted where lead-based paint is present, generated lead loadings on floors at a distance of 5 to 6 feet from the activity that exceeded EPA's dust-lead hazard standard of $40 \mu\text{g}/\text{ft}^2$. However, upon further review, it is apparent that the study also found that drilling into plaster created dust lead levels in the immediate vicinity of the activity that exceeded the dust-lead hazard standard. Thus, all the activities studied did in fact create lead-based paint hazards.

The 2006 Proposal cited the other phases of the TSCA section 402(c)(2) renovation and remodeling study to support EPA's proposed determination that any renovation, remodeling, or painting activity that disturbs lead-based paint can be reasonably anticipated to create lead-based paint hazards. Phase III, the Wisconsin Childhood Blood-Lead Study, found that children who live in homes where renovation and remodeling activities were performed within the past year are 30% more likely to have a blood lead-level that equals or exceeds $10 \mu\text{g}/\text{dL}$, the level of concern established by CDC, than children living in homes where no such activity has taken place recently. Phases II and IV of the study, which evaluated worker exposures from renovation and remodeling activities, provide additional documentation of the significant and direct relationship between blood-lead levels and the conduct of certain renovation and remodeling activities. Phase II found a statistically significant association between increased blood lead levels and the number of days spent performing general renovation and remodeling activities, paint removal, and cleanup in pre-1950 buildings in the past month. Phase IV of the study found that persons performing renovation and remodeling activities in old historic buildings are more likely to have elevated blood-lead levels than persons in the general population of renovation and remodeling workers.

In light of EPA's proposed determination, the 2006 Proposal included revisions to the existing Lead-based Paint Activities Regulations to extend them to renovation, remodeling, and painting activities in target housing, with certain exceptions. In proposing to extend these regulations to renovation, remodeling, and painting activities in child-occupied facilities, the 2007 Supplemental Proposal incorporated the proposed TSCA section 402(c)(3) determination.

Since the 2006 Proposal, EPA conducted the Dust Study and NAHB submitted the results of their survey. The results of the Dust Study confirm that renovation and remodeling activities that disturb lead-based paint create lead-based paint hazards. The Dust Study evaluated a number of common renovation activities, including replacing windows, removing kitchen cabinets, cutting into walls, and removing paint by high and low temperature heat guns, power tools, and dry scraping. The geometric mean post-work dust lead levels on work room floors ranged from a low of $422 \mu\text{g}/\text{ft}^2$, or 10 times the dust-lead hazard standard for floors, for cut-outs, to a high of $32,644 \mu\text{g}/\text{ft}^2$ for power

planing. Thus, all of the activities evaluated in the Dust Study created floor dust lead levels that exceeded 40 $\mu\text{g}/\text{ft}^2$, one of the measures that, in 40 CFR 745.65, defines a lead-based paint hazard. It is more difficult to evaluate the effect of disturbing lead-based paint in the NAHB Survey, since the survey did not involve collecting samples after work had been performed but before the post-renovation cleaning had begun. Nevertheless, even after post-renovation cleaning using a variety of methods, in more than half of the 60 experiments performed in this survey, the post-cleaning dust wipe sample results for at least one surface showed an increase greater than the TSCA section 403 hazard standard over pre-work levels. These experiments showing increased dust-lead levels cover the range of activities evaluated in the NAHB Survey.

Therefore, in this action, EPA is issuing its determination that renovation, repair, and painting activities that disturb lead-based paint create lead-based paint hazards. Because the evidence shows that all such activities in the presence of lead-based paint create lead-based paint hazards, EPA is modifying its proposed finding, which distinguished between activities that create lead-based paint hazards and those that can reasonably be anticipated to create lead-based paint hazards, and instead concludes that renovation activities that disturb lead-based paint create lead-based paint hazards. Indeed, no commenter submitted data indicating that any renovation, repair, or painting activity should be exempt from regulation because it does not create lead-based paint hazards.

EPA received a large number of comments on this proposed finding. Many expressed support for EPA's determination that any renovation, repair, or painting activity that disturbs lead-based paint creates lead-based paint hazards. Some commenters, while expressing their support for this determination, also opined that the regulatory dust-lead hazard standards for floors and windowsills are too high. These commenters argued that recent scientific evidence shows that children experience adverse health effects at lower blood lead levels than previously thought, and since EPA's regulatory dust-lead hazard standards were set with reference to a blood lead level of 10 $\mu\text{g}/\text{dL}$, the CDC level of concern, the dust-lead hazard standards must be lowered. EPA agrees that recent studies demonstrate that neurocognitive effects occur at blood lead levels below the current CDC level of concern. In fact, EPA's most recent Air Quality Criteria for Lead document, issued in October, 2006, describes several epidemiologic studies published in the last 5 years that observed significant lead-induced IQ decrements in children with some effects observed at blood lead levels of 5 $\mu\text{g}/\text{dL}$ and lower (Ref. 1). The document also notes that other recent studies observed significant associations at low blood-lead levels for other neurotoxicity endpoints in addition to IQ, such as arithmetic and reading scores, attentional behavior, and neuromotive function. However, EPA is not addressing the appropriateness of the

existing dust-lead hazard standards in this rulemaking. The original hazard standards were set through a separate rulemaking process under TSCA section 403 that allowed for input from all of the parties that would be affected by the standards. Furthermore, EPA is concerned that a full review of the available evidence and other considerations affecting the hazard standards as part of this rulemaking would result in a significant delay in promulgating training, certification, and work practice standards for renovation activities. EPA did not propose to modify the TSCA section 403 hazard standard levels in this rulemaking and has not undertaken the significant analyses that would need to be performed in order to establish different standards. Accordingly, EPA is not able, in this final rule, to modify the regulatory hazard standard. In any event, since EPA finds that renovation activities that disturb lead-based paint create lead-paint hazards, lowering the hazard standard would not affect EPA's finding.

Some commenters objected to EPA's proposed determination that renovation, repair, or painting activities that disturb lead-based paint create lead-based paint hazards. Some commenters interpreted EPA's statutory authority to regulate renovation and remodeling under TSCA section 402(c)(3) as being limited to those renovation and remodeling activities for which EPA can prove a link between the activity and the blood lead action level established by CDC for public health intervention. These commenters contend that the failure to prove such a link means that renovation and remodeling activities do not create lead-based paint hazards. This interpretation is not supported by the plain language of the statute. TSCA section 402(c)(3) requires EPA to regulate renovation and remodeling activities that create lead-based paint hazards. The term "lead-based paint hazard" is defined in TSCA section 401 as "any condition that causes exposure to lead from lead-contaminated dust . . . that would result in adverse human health effects as established by the Administrator under this subchapter." TSCA section 403 directs EPA to promulgate regulations which "identify, for purposes of this subchapter and the Residential lead-Based Paint Hazard Reduction Act of 1992, lead-based paint hazards, lead-contaminated dust, and lead-contaminated soil." The TSCA section 403 regulations define dust-lead hazards as levels that equal or exceed 40 $\mu\text{g}/\text{ft}^2$ of lead on floors or 250 $\mu\text{g}/\text{ft}^2$ of lead on interior windowsills. Therefore, EPA interprets TSCA as directing it to regulate renovation and remodeling activities if such activities create dust-lead levels that exceed the standards for dust-lead hazards established under TSCA section 403. Again, the Environmental Field Sampling Study, the Dust Study, and the NAHB survey all demonstrate that renovation and remodeling activities that disturb lead-based paint create dust lead levels that exceed the hazard standards in 40 CFR 745.65.

EPA also interprets the scientific evidence for a link between renovations and the CDC blood lead action level differently than do these commenters. EPA's Wisconsin Childhood Blood-Lead Study,

described more fully in Unit III.C.1.c. of the preamble to the 2006 Proposal, provides ample evidence of a link between renovation activities and elevated blood lead levels in resident children (Ref. 13). This peer-reviewed study concluded that general residential renovation and remodeling is associated with an increased risk of elevated blood lead levels in children and that specific renovation and remodeling activities are also associated with an increase in the risk of elevated blood-lead levels in children. In particular, removing paint (using open flame torches, using heat guns, using chemical paint removers, and wet scraping/sanding) and preparing surfaces by sanding or scraping significantly increased the risk of elevated blood-lead levels. Some of the commenters on this rule focused on Table 3-13 in the study report and cited that as evidence that work performed by paid professional renovators does not create a statistically significant risk of an elevated blood-lead level in a resident child. EPA agrees that this table, which presents the results of analyses using one of the sets of models used to interpret study data, indicates that, with respect to the persons performing the work, the only statistically significant result associated with increased risk of elevated blood lead levels was work performed by a relative or friend not in the household. Work performed by professional renovators was associated with an increased risk of an elevated blood lead level, but the association was not statistically significant. As explained more fully in a memorandum summarizing additional analyses of the data from this study (Ref. 20), this table does not indicate that professional contractors were not responsible for creating lead exposure hazards. Rather, it indicates that renovation activities performed by professional contractors are no more or less hazardous than renovation activities performed by most of the other categories of persons identified in the survey responses collected as part of the study. It is also important to note that, while these commenters focus on a blood-lead level of 10 µg/dL as a threshold, this level is not and has not been considered by CDC or EPA as a threshold for adverse effects.

One commenter also dismissed the two studies from New York that EPA cited as supporting the findings of the Wisconsin Childhood Blood-Lead Study. In 1995, the New York State Department of Health assessed lead exposure among children resulting from home renovation and remodeling in 1993–1994. A review of the health department records of children with blood lead levels equal to or greater than 20 µg/dL identified 320, or 6.9%, with elevated blood lead levels that were attributable to renovation and remodeling (Ref. 29). The commenter noted that this study suffered from a number of limitations, including the fact that it was not a case-control study; i.e., the group of children with elevated blood lead levels attributed to renovation and remodeling was not compared with a similar group of households that had not undergone renovation during the period. EPA agrees that this is an important limitation of this study. However, with respect to the other limitations noted by this commenter, the authors of the report felt that

most of these limitations would likely result in an underestimation of the burden of lead exposure associated with renovation and remodeling.

The other study cited by EPA as supporting the Wisconsin Childhood Blood-Lead Study conclusions was a case-control study that assessed the association between elevated blood lead levels in children younger than 5 years and renovation or repair activities in homes in New York City (Ref. 22). EPA notes that the authors show that when dust and debris was reported (by respondents via telephone interviews) to be “everywhere” following a renovation, the blood lead levels were significantly higher than children at homes that did not report remodeling work. On the other hand, when the respondent reported either “no visible dust and debris” or that “dust and debris was limited to the work area,” there was no statistically significant effect on blood lead levels relative to homes that did not report remodeling work. Although the study found only a weak and nonsignificant link between a report of any renovation activity and the likelihood that a resident child had an elevated blood-lead level, the link to the likelihood of an elevated blood-lead level was statistically significant for surface preparation by sanding and for renovation work that spreads dust and debris beyond the work area. The researchers noted the consistency of their results with EPA’s Wisconsin Childhood Blood-Lead Study (Ref. 13, at 509). EPA notes that this confirms that keeping visible dust and debris contained to the work area is important for limiting children exposures to lead dust, rather than providing substantial arguments for the effectiveness of visual inspection.

In sum, EPA’s finding that renovation and remodeling activities create lead-based paint hazards is not dependent upon establishing a correlation between such activities and elevated blood lead levels. Rather, it rests on the fact that, as demonstrated by EPA’s Environmental Field Sampling Study, EPA’s Dust Study, and by the NAHB Survey, such activities create lead-based paint hazards as defined by EPA regulations. Moreover, EPA disagrees that there is no scientific support for establishing a relationship between elevated blood lead levels in children and renovation activities. While EPA interprets these studies as supporting such a relationship and believes these studies further support its finding, it is not a determinative factor.

b. *EPA’s approach to this final rule.* Given EPA’s determination that renovation, repair, and painting activities that disturb lead-based paint create lead-based paint hazards, TSCA section 402(c)(3) directs EPA to revise the Lead-based Paint Activities Regulations to apply to these activities. EPA does not interpret its statutory mandate to require EPA to apply the existing TSCA section 402(a) regulations to renovations without change. By using the word “revise,” and creating a separate subsection of the statute for renovation, EPA believes that Congress intended that EPA make revisions to those existing regulations to adapt them to a very different regulated community. As discussed below, there are significant differences between renovations and abatements.

Accordingly, this final rule does not merely expand the scope of the current abatement requirements to cover renovation and remodeling activities. Rather, EPA has carefully considered the elements of the existing abatement regulations and revised them as necessary to craft a rule that is practical for renovation, remodeling and painting businesses and their customers, taking into account reliability, effectiveness, and safety as directed by TSCA section 402(a). Specifically, the Agency concludes that the training, containment, cleaning, and cleaning verification requirements in this final rule achieve the goal of minimizing exposure to lead-based paint hazards created during renovation, remodeling and painting activities, taking into account reliability, effectiveness, and safety.

In taking safety into account, EPA looked to the statutory directive to regulate renovation activities that create lead-based paint hazards. Although there is no known level of lead exposure that is safe, EPA does not believe the intent of Congress was to require elimination of all possible risk arising from a renovation. Nor does TSCA explicitly require EPA to eliminate all possible risk from lead, nor would it be feasible to do so since lead is a component of the earth. Rather, it directs EPA to regulate renovation and remodeling activities that create lead-based paint hazards. Given that the trigger for regulating renovation and remodeling activities is the creation of lead-based paint hazards--which EPA has identified in a separate rulemaking pursuant to TSCA section 403--EPA believes taking safety into account in this context is best interpreted with reference to those promulgated hazard standards. If taking safety into account required a more stringent standard, as suggested by some commenters, the potential would be created for a scheme under which any renovation activities found not to create hazards are not regulated at all, whereas renovation activities found to create hazards trigger requirements designed to leave the renovation site cleaner than the unregulated renovations. EPA's interpretation is supported by the broad Congressional intent that the section 403 hazard standards apply for purposes of subchapter IV of TSCA. It is also consistent with EPA's approach in its abatement regulations, which require post-abatement cleaning to dust-lead clearance levels that are numerically equal to the TSCA section 403 hazard standards levels. It would be anomalous to impose a more stringent safety standard in the renovation context than in the abatement context, where the express purpose of the regulated activities is to abate lead-based paint hazards. Therefore, in taking into account safety, this final rule regulates renovation and remodeling activities relative to the TSCA section 403 hazard standard, with the purpose of minimizing exposure to such hazards created during renovation and remodeling activities.

Additionally, EPA has interpreted practicality in implementation to be an element of the statutory directive to take into account effectiveness and reliability. In particular, EPA believes that given the highly variable nature of the regulated community, the work practices

required by this rule should be simple to understand and easy to use. EPA is very aware that this regulation will apply to a whole range of individuals from day laborers to property maintenance staff to master craftsmen performing a whole range of activities from simple drywall repair to window replacement to complete kitchen and bath renovations to building additions and everything in between. Work practices that are easy and practical to use are more likely to be followed by all of the persons who perform renovations, and, therefore, more likely to be reliable and effective in minimizing exposure to lead-based paint hazards created by renovation activities.

One of the biggest challenges facing EPA in revising the TSCA section 402(a) Lead-based Paint Activities Regulations is how to effectively bridge the differences between abatement and renovation and remodeling while acknowledging that many of the dust generating activities are the same. Abatements are generally performed in three circumstances. First, an abatement may be performed in the residence of a child who has been found to have an elevated blood lead level. Second, abatements are performed in housing receiving HUD financial assistance when required by HUD's Lead-Safe Housing Rule. Third, state and local laws and regulations may require abatements in certain situations associated with rental housing. Typically, when an abatement is performed, the housing is either unoccupied or the occupants are temporarily relocated to lead-safe housing until the abatement has been demonstrated to have been properly completed through dust clearance testing. Carpet in the housing is usually removed as part of the abatement because it is difficult to demonstrate that it is free of lead-based paint hazards. Uncarpeted floors that have not been replaced during the abatement may need to be refinished or sealed in order to achieve clearance. Abatements have only one purpose--to permanently eliminate lead-based paint and lead-based paint hazards.

On the other hand, renovations are performed for a myriad of reasons, most having nothing to do with lead-based paint. Renovations involve activities designed to update, maintain, or modify all or part of a building. Renovations may be performed while the property is occupied or unoccupied. If the renovation is performed while the property is occupied, the occupants do not typically relocate pending the completion of the project.

Further, performing abatement is a highly specialized skill that workers and supervisors must learn in training courses accredited by EPA or authorized States, Territories, and Tribes. In contrast, EPA is not interested in teaching persons how to be painters, plumbers, or carpenters. Rather, EPA's objective is to ensure that persons who already know how to perform renovations perform their typical work in a lead-safe manner.

Nevertheless, as pointed out by some commenters, abatement and renovation have some things in common. For example, as noted by one

commenter, window replacement may be performed as part of an abatement to remove the lead-based paint and lead-based paint hazards on the existing window, or it may be performed as part of a renovation designed to improve the energy efficiency of the building. In many cases, the window replacement as abatement and the window replacement as renovation will generate the same amount of leaded dust.

Another consideration is that while renovation activities undoubtedly create lead-based paint hazards, without results from dust wipe samples collected immediately before the renovation commences, there is no way to tell what portion of the lead dust remaining on the surface was contributed by the renovation. In addition, as a practical matter, once dust-lead hazards commingle with pre-existing hazards, there is no functional way to distinguish between those created by the renovation activity and any pre-existing dust-lead hazards. However, the Dust Study shows that the combination of training, containment, cleaning and cleaning verification required by this rule is effective at reducing dust-lead levels below the dust-lead hazard standard. While the requirements of this rule will, in some cases, have the ancillary benefit of removing some pre-existing dust-lead hazards, these requirements are designed to effectively clean-up the lead-based paint hazards created during renovation activities without changing the scope of the renovation activity itself. The intent of this final rule is not to require cleanup of pre-existing contamination.

For example, the rule does not require cleaning of dust or any other possible lead sources in portions of target housing or child-occupied facilities beyond the location in and around the work area. Nor does this rule require the replacement of carpets in the area of the renovation or the refinishing or sealing of uncarpeted floors. The approach in this final rule is designed to address the lead-based paint hazards created during the renovation while not requiring renovators to remediate or eliminate hazards that are beyond the scope of the work they were hired to do.

In addition, EPA has made a concerted effort to keep the costs and burdens associated with this rule as low as possible, while still providing adequate protection against lead-based paint hazards created by renovation activities. Indeed, as part of this rulemaking EPA has, as directed by TSCA section 2(c), considered the environmental, economic, and social impact of this rule. Nonetheless, many commenters expressed concerns over the potential unintended consequences of this rulemaking. These commenters argued that a too-burdensome rule will result in more renovations by noncompliant renovators, and more do-it-yourself renovations, both of which are likely to be more hazardous than renovations by certified professional renovation firms using certified renovators who follow the work practice requirements of the rule. These commenters were also concerned about deferred property maintenance which can be

hazardous for many reasons, including lead-based paint issues. For example, one commenter pointed out that a renovation project that replaces old lead-based paint covered windows with new ones that have no lead-based paint may, as a by-product, reduce lead hazards, and the rule should not work to discourage this activity.

On the other hand, one commenter argued that increased do-it-yourself activity is an unlikely byproduct of this rule because consumers are not only opting to hire or not hire contractors based on factors such as cost, convenience, and perceived quality, but, even more importantly, their own proclivity towards performing renovation work. According to the commenter, the fact that the work practices required by this rule may result in slight cost increases is unlikely to motivate homeowners to perform their own renovations. This commenter also felt that the sooner that protective approaches become the accepted standard of care for renovation work by contractors receiving compensation, the sooner do-it-yourselfers and the do-it-yourself literature and training supports will adopt the same protective approaches.

It is difficult to determine with any amount of certainty whether this final rule will have unintended consequences. However, EPA agrees that it is important to minimize disincentives for using certified renovation firms who follow the work practices required by this rule. EPA also agrees that practicality is an important consideration. Given the relatively low estimated overall average per-job cost of this final rule, which is \$35, and the relatively easy-to-use work practices required by this final rule, EPA does not expect the incremental costs associated with this rule to be a determinative factor for consumers. However, that relatively low cost has resulted in part from EPA's efforts to contain the costs of this rule in order to avoid creating disincentives to using certified renovation firms, and EPA has viewed the comments received with those considerations in mind.

With respect to the comment regarding the standard of care for do-it-yourselfers, EPA also plans to conduct an outreach and education campaign aimed at encouraging homeowners and other building owners to follow work practices while performing renovations or hire a certified renovation firm to do so.

7. *Summary of the final rule.* This section summarizes the final rule in general terms. For more information, consult Unit III. below, which describes each provision in detail, discusses any changes from the proposal, and reviews the comments received.

a. *Definitions and scope.* This final rule applies to renovations for compensation in target housing and child-occupied facilities. TSCA section 401 defines "target housing" as any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than 6 years of age resides or is expected

to reside in such housing for the elderly or persons with disabilities) or any 0–bedroom dwelling. This rule contains the following definition of “child-occupied facility”:

Child-occupied facility” means a building, or portion of a building, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least two different days within any week (Sunday through Saturday period), provided that each day’s visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may include, but are not limited to, day care centers, preschools and kindergarten classrooms. Child-occupied facilities may be located in target housing or in public or commercial buildings. With respect to common areas in public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only those common areas that are routinely used by children under age 6, such as restrooms and cafeterias. Common areas that children under age 6 only pass through, such as hallways, stairways, and garages are not included. In addition, with respect to exteriors of public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only the exterior sides of the building that are immediately adjacent to the child-occupied facility or the common areas routinely used by children under age 6.

TSCA does not define the terms “renovation” or “remodeling,” but this final rule builds upon the definition of “renovation” already established by the regulations promulgated under TSCA section 406(b). This rule defines “renovation” as follows:

“Renovation” means the modification of any existing structure, or portion thereof, that results in the disturbance of painted surfaces, unless that activity is performed as part of an abatement as defined by this part (40 CFR 745.223). The term renovation includes (but is not limited to): The removal, modification or repair of painted surfaces or painted components (e.g., modification of painted doors, surface restoration, window repair, surface preparation activity (such as sanding, scraping, or other such activities that may generate paint dust)); the removal of building components (e.g., walls, ceilings, plumbing, windows); weatherization projects (e.g., cutting holes in painted surfaces to install blown-in insulation or to gain access to attics, planing thresholds to install weather-stripping), and interim controls that disturb painted surfaces. A renovation performed for the purpose of converting a building, or part of a building, into target housing or a child-occupied facility is a renovation under this subpart. The term renovation does not include minor repair and maintenance activities.

This final rule excludes some of the same projects that are excluded by the TSCA section 406(b) regulations, such as lead-based paint abatement projects and renovations affecting components that have been found to be free of lead-based paint. To be eligible for the latter exception, the components must be determined to be free of lead-based paint by a certified inspector or risk assessor, or by a certified renovator using an EPA-approved test kit. Emergency projects would continue to

be exempt from the lead hazard information distribution requirements, but the clean-up after the project must meet the requirements of this regulation, and compliance with the training, certification, warning sign, and containment requirements of this regulation is required to the extent practicable. Minor maintenance projects that disturb no more than 6 square feet of painted surface per room for interiors or no more than 20 square feet of painted surface for exteriors are also exempt, so long as no work practices prohibited or restricted by this final rule are used, the renovation does not involve window replacement and there is no demolition of painted areas. Finally, this regulation contains an exception for renovations in owner-occupied target housing where no child under age 6 or pregnant woman resides, so long as the housing does not meet the definition of “child-occupied facility.” To claim this exception, the renovation firm must obtain, before beginning the renovation, a signed statement from the owner of the housing that states that the person signing is the owner of the housing to be renovated, that he or she resides there, that no child under age 6 or pregnant woman resides there, that the housing is not a child-occupied facility, and that the owner understands that the renovation firm will not be required to use the work practices contained in this rule.

b. *Pre-Renovation Education Rule.* As described in greater detail in a separate notice published elsewhere in today’s **Federal Register**, EPA has developed a new renovation-specific lead hazard information pamphlet intended for use in fulfilling the requirements of the Pre-Renovation Education Rule, 40 CFR part 745, subpart E. This final rule requires firms performing renovations for compensation in target housing and child-occupied facilities to distribute this new pamphlet before beginning renovations to the owners and occupants of target housing, owners of public or commercial buildings that contain a child-occupied facility, and the proprietor of the child-occupied facility, if different, and to provide general information on the renovation and the pamphlet to, or make it available to, parents or guardians of children under age 6 using the child-occupied facility. This can be accomplished by mailing or hand-delivering the general information on the renovation and the pamphlet to the parents and guardians or by posting informational signs containing general information on the renovation in areas where the signs can be seen by the parents or guardians of the children frequenting the child-occupied facility. The signs must be accompanied by a posted copy of the pamphlet or information on how interested parents or guardians can review a copy of the pamphlet or obtain a copy from the renovation firm at no cost to the parents or guardians. For renovations in the common areas of multi-unit target housing, similar notification options are available to firms. They must provide tenants with general information regarding the nature of the renovation by mail, by hand-delivery, or by posting signs, and must also make this new pamphlet available upon request. Firms must maintain documentation of compliance with these requirements.

c. Training, accreditation, and certification. This final rule contains training requirements leading to certification for “renovators”—individuals who perform and direct renovation activities—and “dust sampling technicians”—individuals who perform dust sampling not in connection with an abatement. Requirements for each of these courses of study are described in detail, and a hands-on component is required. Training providers who wish to provide training to renovators and dust sampling technicians for Federal certification purposes must apply for and receive accreditation from EPA following the same procedures that training providers who offer lead-based paint activities training now use to become accredited by EPA. Providers of renovation training must follow the same requirements for program operation as training providers who offer lead-based paint activities training. For example, renovation training programs must have adequate facilities and equipment for delivering the training, a training manager with experience or education in a construction or environmental field, and a principal instructor with experience or education in a related field and education or experience in teaching adults. To become accredited to provide training for renovators and dust sampling technicians, a provider must submit an application for accreditation to EPA. The application must include the following items:

- The course materials and syllabus, or a statement that EPA model materials or materials approved by an authorized State or Tribe will be used.
- A description of the facilities and equipment that will be used.
- A copy of the test blueprint for each course.
- A description of the activities and procedures that will be used during the hands-on skills portion of each course.
- A copy of the quality control plan.
- The correct amount of fees.

Training programs that submit a complete application and meet the requirements for faculty, facilities, equipment, and course and test content will be accredited for 4 years. To maintain accreditation, the training program must submit an application and the correct amount of fees every 4 years. EPA is not establishing the required fees in this rulemaking. EPA intends to publish a proposed fee schedule for public comment shortly. Accredited renovation training programs must also comply with the existing notification and recordkeeping requirements for lead-based paint activities training programs at 40 CFR 745.225(c)(13) and 40 CFR 745.225(i), respectively, by notifying EPA before and after providing renovation training and by maintaining records of course materials, course test blueprints, information on how hands-on training is delivered, and the results of the students’ skills assessments and course tests.

Each renovation project covered by this final rule must be performed and/or directed by an individual who has become a certified renovator by successfully completing renovator training from an accredited training provider. The certified renovator is responsible for ensuring compliance with the work practice standards of this final regulation. The certified renovator must perform or direct certain critical tasks during the renovation, such as posting warning signs, establishing containment of the work area, and cleaning the work area after the renovation. These and other renovation activities may be performed by workers who have been provided on-the-job training in these activities by a certified renovator. However, the certified renovator must be physically present at the work site while signs are being posted, containment is being established, and the work area is being cleaned after the renovation to ensure that these tasks are performed correctly. Although the certified renovator is not required to be on-site at all times, while the renovation project is ongoing, a certified renovator must nonetheless regularly direct the work being performed by other workers to ensure that the work practices are being followed. When a certified renovator is not physically present at the work site, the workers must be able to contact the renovator immediately by telephone or other mechanism. In addition, the certified renovator must perform the post-renovation cleaning verification. This task may not be delegated to workers with on-the-job training. To maintain certification, a renovator must successfully complete an accredited renovator refresher training course every 5 years.

Renovations must be performed by certified firms. The certification requirements for renovation firms are identical to the certification requirements for firms that perform lead-based paint activities, except that renovation firm certification lasts for 5 years instead of 3 years. A firm that wishes to become certified to perform renovations must submit an application, along with the correct amount of fees, attesting that it will assign a certified renovator to each renovation that it performs, that it will use only certified or properly trained individuals to perform renovations, and that it will follow the work practice standards and recordkeeping requirements in this regulation. EPA will certify any firm that meets these requirements unless EPA determines that the environmental compliance history of the firm, its principals, or its key employees demonstrates an unwillingness or inability to maintain compliance with environmental statutes or regulations. To maintain certification, the firm must submit an application and the correct amount of fees every 5 years. As noted above, EPA will establish the required fees in a subsequent rulemaking.

d. *Work practice standards.* This final rule contains a number of work practice requirements that must be followed for every covered renovation in target housing and child-occupied facilities. These requirements pertain to warning signs and work area containment, the restriction or prohibition of certain practices (e.g., high heat gun, torch,

power sanding, power planing), waste handling, cleaning, and post-renovation cleaning verification. The firm must ensure compliance with these work practices. Although the certified renovator is not required to be on-site at all times, while the renovation project is ongoing, a certified renovator must nonetheless regularly direct the work being performed by other workers to ensure that the work practices are being followed. When a certified renovator is not physically present at the work site, the workers must be able to contact the renovator immediately by telephone or other mechanism.

i. *Warning signs and work area containment.* Before beginning a covered renovation, the certified renovator or a worker under the direction of the certified renovator must post signs outside the area to be renovated warning occupants and others not involved in the renovation to remain clear of the area. In addition, the certified renovator or a worker under the direction of the certified renovator must also contain the work area so that dust or debris does not leave the area while the work is being performed. At a minimum, containment for interior projects must include:

- Removing or covering all objects in the work area with plastic or other impermeable material.
- Closing and covering all forced air HVAC ducts in the work area with plastic or other impermeable material.
- Closing all windows in the work area.
- Closing and sealing all doors in the work area with plastic or other impermeable material.
- Covering the floor surface, including installed carpet, with taped-down plastic sheeting or other impermeable material in the work area 6 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to contain the dust, whichever is greater.

Doors within the work area that will be used while the job is being performed must be covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area. In addition, all personnel, tools, and other items, including the exterior of containers of waste, must be free of dust and debris when leaving the work area. There are several ways of accomplishing this. For example, tacky mats may be put down immediately adjacent to the plastic sheeting covering the work area floor to remove dust and debris from the bottom of the workers' shoes as they leave the work area, workers may remove their shoe covers (booties) as they leave the work area, and clothing and materials may be wet-wiped and/or HEPA-vacuumed before they are removed from the work area.

At a minimum, containment for exterior projects must include:

- Covering the ground with plastic sheeting or other disposable impermeable material extending 10 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to collect falling paint debris, whichever is greater, unless the property line prevents 10 feet of such ground covering.
- Closing all doors and windows within 20 feet of the outside of the work area on the same floor as the renovation and closing all doors and windows on the floors below that area.

In certain situations, such as where other buildings are in close proximity to the work area, when conditions are windy, or where the work area abuts a property line, the certified renovator or a worker under the direction of the certified renovator performing the renovation may have to take extra precautions to prevent dust and debris from leaving the work area as required by the regulation. This may include erecting a system of vertical containment designed to prevent dust and debris from migrating to adjacent property or contaminating the ground, other buildings, or any object beyond the work area. In addition, doors within the work area that will be used while the job is being performed must be covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area.

ii. *Waste management.* The certified renovator or a worker trained and directed by a certified renovator must, at the conclusion of each work day, store any collected lead-based paint waste from renovation activities under containment, in an enclosure, or behind a barrier that prevents release of dust and debris and prevents access to the waste. In addition, the certified renovator or a worker under the direction of the certified renovator transporting lead-based paint waste from a work site must contain the waste to prevent identifiable releases. With regard to the lead-based paint waste generated by renovations in housing units, Unit IV.D.2. of the preamble to the 2006 Proposal describes how a clarification of the hazardous waste exclusion in 40 CFR 261.4(b)(1) means that residential lead-based paint waste may be disposed of in municipal solid waste landfill units, as long as the waste is generated during abatement or renovation and remodeling activities in households. Also discussed in the preamble to the 2006 Proposal is a subsequent amendment to the waste regulations promulgated under the Resource Conservation and Recovery Act (RCRA) that allows construction and demolition (C&D) landfills to accept residential lead-based paint waste.

iii. *Cleaning.* This final rule contains a number of specific cleaning steps that the certified renovator or a worker under the direction of the certified renovator must follow after performing a covered renovation. Upon completion of renovation activities, all paint chips and debris must be picked up. Protective sheeting must be misted and folded dirty side inward. Sheeting used to isolate the work area from other areas

must remain in place until after the cleaning and removal of other sheeting; this sheeting must be misted and removed last. Removed sheeting must either be folded and taped shut to seal or sealed in heavy-duty bags and disposed of as waste.

After the sheeting has been removed from the work area, the entire area must be cleaned, including the adjacent surfaces that are within 2 feet of the work area. The walls, starting from the ceiling and working down to the floor, must be vacuumed with a HEPA vacuum or wiped with a damp cloth. This final rule requires that all remaining surfaces and objects in the work area, including floors, furniture and fixtures, be thoroughly vacuumed with a HEPA-equipped vacuum. When cleaning carpets, the HEPA vacuum must be equipped with a beater bar to aid in dislodging and collecting deep dust and lead from carpets. Where feasible, floor surfaces underneath area rugs must also be thoroughly vacuumed with a HEPA vacuum.

After vacuuming, all surfaces and objects in the work area, except for walls and carpeted or upholstered surfaces, must be wiped with a damp cloth. Uncarpeted floors must be thoroughly mopped using a 2-bucket mopping method that keeps the wash water separate from the rinse water, or using a wet mopping system with disposable absorbent cleaning pads and a built-in mechanism for distributing or spraying cleaning solution from a reservoir onto a floor.

For cleaning following an exterior renovation, this final rule requires all paint chips and debris to be picked up. Protective sheeting must be misted and folded dirty side inward. Removed sheeting must be either folded and taped shut to seal or sealed in heavy-duty bags and disposed of as waste.

iv. Post-renovation cleaning verification. This final rule requires a certified renovator to perform a visual inspection of the work area after the cleaning steps outlined in the previous subsection. This visual inspection is for the purpose of determining whether dust, debris, or other residue is present in the work area. If dust, debris, or other residue remains in the work area, the dust, debris, or other residue must be removed by re-cleaning and another visual inspection must be performed.

When an exterior work area passes the visual inspection, the renovation has been properly completed and the warning signs may be removed. When an interior work area passes the visual inspection, an additional cleaning verification step is required. A certified renovator assigned to the renovation project must use disposable cleaning cloths to wipe the windowsills and uncarpeted floors in the work area. These cloths must then be compared to a cleaning verification card. For each cloth that matches or is lighter than the cleaning verification card, the corresponding windowsill or floor area is considered to have passed the post-renovation cleaning verification. In contrast to the 2006

Proposal, this final rule limits this requirement to two wet cloths and one dry cloth. After the first dry cloth, that surface will be considered to have passed post-renovation cleaning verification. When all windowsills and floor areas in the work area have passed post-renovation cleaning verification, the warning signs may be removed. More information on the post-renovation cleaning verification procedure and the underlying studies can be found in Unit IV.E. of the preamble to the 2006 Proposal and in Unit III.E.7. of this preamble.

In contrast to the 2006 Proposal, this final rule does not allow dust clearance sampling in lieu of post-renovation cleaning verification, except in cases where the contract between the renovation firm and the property owner or another Federal, State, Territorial, Tribal, or local regulation requires dust clearance sampling by a certified sampling professional and requires the renovation firm to clean the work area until it passes clearance.

e. State, Territorial, and Tribal programs. This final rule also contains provisions for interested States, Territories, and Tribes to apply for and receive authorization to administer their own renovation, repair and painting programs in lieu of the proposed regulation. States, Territories and Tribes may choose to administer and enforce just the existing requirements of subpart E, the pre-renovation education elements, the training, certification, accreditation, work practice, and recordkeeping requirements of this final rule, or both. EPA will use the same process used for lead-based paint activities programs, along with proposed specific renovation program elements, to authorize State, Territorial, and Tribal programs.

States, Territories, and Tribes seeking authority to administer and enforce renovation programs must obtain public input and then submit an application to EPA. Applications must contain a number of items, including a description of the State, Territorial, or Tribal program, copies of all applicable statutes, regulations, and standards, and a certification by the State Attorney General, Tribal Counsel, or an equivalent official, that the applicable legislation and regulations provide adequate legal authority to administer and enforce the program. The program description must demonstrate that the State, Territorial, or Tribal program is at least as protective as the Federal program and that it provides for adequate enforcement.

To be eligible for authorization to administer and enforce renovation programs, State, Territorial, and Tribal renovation programs must contain certain minimum elements that are very similar to the minimum elements required for lead-based paint activities programs. In order to be authorized, State, Territorial, or Tribal programs must have procedures and requirements for the accreditation of training programs, the training of renovators, and the certification of renovators or renovation firms. At a minimum, the program requirements must include accredited training for renovators and procedures and

requirements for re-certification. State, Territorial, and Tribal programs applying for authorization are also required to include work practice standards for renovations that ensure that renovations are conducted only by certified renovators or renovation firms and that renovations are conducted using work practices at least as protective as those of the Federal program.

B. What is the Agency's Authority for Taking this Action?

These training, certification and accreditation requirements; State, Territorial, and Tribal authorization provisions; and work practice standards are being promulgated under the authority of TSCA sections 402(c)(3), 404, 406, and 407, 15 U.S.C. 2682(c)(3), 2684, 2686, and 2687, and in a manner that is consistent with TSCA section 2(c), 15 U.S.C. 2601(c).

III. Provisions of this Final Rule

This unit describes the specific provisions of the final regulation and discusses the major comments received.

A. Scope of the Final Rule

EPA is amending the existing regulations at 40 CFR part 745, subpart E (the “Pre-Renovation Education Rule”), that implement TSCA section 406(b) to add training and certification requirements, as well as work practice standards, for certain renovation, repair, and painting projects performed for compensation in target housing and in child-occupied facilities.

*1. Buildings covered—*a. *Target housing.* The requirements of this final rule apply to renovations performed for compensation within and on the exteriors of target housing units, including renovations performed for compensation in common areas, such as hallways, stairways, and laundry and recreational rooms, in multi-unit target housing. The term “target housing” is defined in TSCA section 401 as any housing constructed before 1978, except housing for the elderly or persons with disabilities (unless any child under age 6 resides or is expected to reside in such housing) or any 0-bedroom dwelling.

Several commenters were concerned about the exclusion of 0-bedroom dwellings from the definition of “target housing.” These commenters noted that this effectively excludes a significant subset of housing where children live, particularly studio or efficiency apartments and certain low-income housing such as single-room occupancy hotels. One commenter stated that, in his city, at least 400 families with more than 700 children live in single-room occupancy hotels, and these hotels constitute some of oldest housing in their city. Other commenters were concerned about the exclusion of housing for the elderly (or persons with disabilities) unless any child under age 6 resides or is expected to reside in such housing. These commenters suggested that EPA not exempt such housing because children may be

present for a substantial amount of time. One commenter noted that, because some children spend 40 or more hours per week at their grandparents' home, eliminating housing for the elderly from the rule would place an inordinate number of young children at risk. Another commenter observed that unless the building is reserved for elderly residents only, the likelihood of children living in a multi-unit building and being exposed to lead hazards in common areas is high.

EPA understands and shares the concerns of these commenters. However, these exclusions were established by Congress in Title X. The exclusions and limitations in the exclusions appear consistent with a focus on housing where children under age 6 reside. Nonetheless, EPA does wish to point out that this regulation and other existing TSCA regulations cover activities in common areas that are accessible to residents of target housing units. Thus, renovations in common areas in a building built before 1978 that contains both housing units reserved for the elderly and regular housing units would be covered by this rule. In addition, as described more fully in Unit III.G. of this preamble, States, Territories and Tribes may choose to develop and implement their own lead renovation, repair, and painting programs. Such programs may be more stringent than this Federal regulation and could, therefore, cover 0-bedroom dwellings or housing for the elderly.

Finally, one commenter questioned the existing definition of "multi-family housing" in 40 CFR 745.83, which defines the term as a "housing property consisting of more than four dwelling units." The commenter referred to the definition of "multi-family dwelling" in 40 CFR 745.223 which does not limit the term to a specific number of units, and questioned why smaller multi-family housing such as duplexes should not be included in the definition in 40 CFR 745.83. This commenter and others contended that it is important to cover common areas, including building exteriors, in all multi-unit target housing. In response to these commenters, EPA is deleting the definition of "multi-family housing" from 40 CFR 745.83 because the term is not used in this final rule. This final rule covers renovations in common areas, including building exteriors, of multi-unit buildings regardless of the number of units contained in the building. In addition, the deletion of this definition will also make it clear that the existing Pre-Renovation Education Rule provisions also apply to the same renovations covered by this final rule.

b. *Child-occupied facilities.* The certification, training, recordkeeping, and work practice standards of this final rule also apply to renovations for compensation in child-occupied facilities. As discussed in the preamble to the 2007 Supplemental Proposal, numerous commenters on the 2006 Proposal requested that EPA cover child-occupied facilities under this regulation and suggested that EPA use the existing definition of "child-occupied facility" in 40 CFR 745.223. In response, the 2007 Supplemental Proposal included a definition of "child-occupied facility" that was based upon the existing

definition, with modifications to make it consistent with the provisions of the 2006 Proposal. EPA also proposed to modify the definition to clarify, for child-occupied facilities located in public or commercial buildings, which portions of the building would be considered part of the child-occupied facility for purposes of this rulemaking. EPA received several comments suggesting modifications to the proposed definition, but (with the exception of one small clarification) EPA is retaining the proposed definition for the reasons discussed below. The final rule's definition of "child-occupied facility" is as follows:

"Child-occupied facility" means a building, or portion of a building, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least 2 different days within any week (Sunday through Saturday period), provided that each day's visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may include, but are not limited to, day care centers, preschools and kindergarten classrooms. Child-occupied facilities may be located in target housing or in public or commercial buildings. With respect to common areas in public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only those common areas that are routinely used by children under age 6, such as restrooms and cafeterias. Common areas that children under age 6 only pass through, such as hallways, stairways, and garages are not included. In addition, with respect to exteriors of public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only the exterior sides of the building that are immediately adjacent to the child-occupied facility or the common areas routinely used by children under age 6.

EPA added the introductory clauses "with respect to common areas" and "with respect to exteriors of" to the sentences describing the applicability of the rule to common areas and exteriors of public or commercial buildings because EPA was concerned that people would be confused about the area defined by the term "child-occupied facility" in those situations.

Most of the commenters on the 2007 Supplemental Proposal expressed support for including child-occupied facilities within the universe of buildings covered by this rulemaking. Several commenters requested that EPA provide a more clear definition of public buildings that contain child-occupied facilities or additional examples of such facilities. However, EPA is not aware of additional examples that could be included in the definition to make the applicability of this rule clearer. One commenter believed that a definition based upon the amount of time a child spends at a facility would be unworkable.

EPA disagrees with the comment that a time-based definition of child-occupied facility is unworkable. A time-based definition has been a part of the Lead-based Paint Activities Program under TSCA section

402(a) for more than 10 years and EPA is not aware of any significant implementation difficulties. As initially proposed in 1994, the Lead-based Paint Activities Regulations under TSCA section 402(a) would have contained one set of requirements for the training and certification of contractors and the accreditation of training programs, as well as specific work practice standards that would have applied to lead-based paint activities conducted in target housing and public buildings (Ref. 23). A different set of requirements would have applied to lead-based paint activities conducted in commercial buildings and on bridges and other structures. The 1994 proposal would have defined public buildings to include all buildings generally open to the public or occupied or visited by children, such as stores, museums, airports, offices, restaurants, hospitals, and government buildings, as well as schools and day care centers. During the comment period, a significant majority of commenters expressed the concern that applying these regulations to activities in all of the buildings that EPA would consider public would result in significant costs without a comparable reduction in lead-based paint exposures for children under age 6, the population most vulnerable to lead exposures. Many of these commenters recommended that EPA focus its attention on buildings that are frequented by children, rather than on buildings that may be briefly visited by children.

In response to these comments, EPA established, in the final rule, a subset of the buildings EPA had intended to define as public. This subset, called “child-occupied facilities,” was delineated in terms of the frequency and duration of visits by children (Ref. 4). These primarily consist of public buildings where young children receive care or instruction on a regular basis, such as child care centers and kindergarten classrooms. The Agency’s decision to define child-occupied facilities as a sub-category of public buildings was based on one of the key objectives of the Lead-based Paint Activities Regulations, which was to prevent lead exposures among young children. The Agency reasoned that children face an equal, if not greater, risk from lead-based paint hazards in schools and day care centers as they do at home. Indeed, EPA was concerned that children could spend more time in a particular classroom or day care room in a given day or week than they might spend in a single room in their homes. With respect to the type of building covered, this regulation will operate in much the same way as the Lead-based Paint Activities Regulations. In most cases, office buildings without child care facilities, museums, stores, airports, and restaurants will not be covered by this rule. Although there may be large numbers of children present at any given time in these kinds of buildings, individual children are not likely to be there often enough and long enough to qualify the building as a child-occupied facility.

Some commenters appeared to be confused about whether the definition of “child-occupied facility” covers housing where informal

or unpaid care is provided, such as the homes of relatives and neighbors. Whether or not a building is a child-occupied facility does not depend upon whether the owner or operator of the child-occupied facility is somehow compensated for the child's presence. Indeed, the first sentence of the definition makes this clear in stating that a child-occupied facility is a "building, or portion of a building, constructed prior to 1978, visited regularly by the same child . . ." The word "visited" is very broad, it includes visits to a relative's house or a neighbor's house as well as visits to a child-care facility or school.

Except in owner-occupied target housing, as discussed below, the firm performing the renovation is responsible for determining whether a building is a child-occupied facility. This can be accomplished in any number of ways. A stand-alone child care center is likely to have a name that suggests that it provides child care, and the center's status as a child-occupied facility should be obvious upon entering the center. Child care centers in office buildings are likely to have informational signs posted and the centers are likely to be identified in the building directory. Elementary schools are likely to have kindergarten classrooms. The renovation firm should inquire about the presence of a child-occupied facility when contracting to perform renovation services in a public or commercial building. However, a statement by the building owner or manager that there is no child-occupied facility in the building may not be relied upon in the face of evidence to the contrary.

Several commenters felt that EPA had inappropriately limited the space encompassed by a child-occupied facility in a public or commercial building. These commenters thought that EPA should follow the approach used for common areas in multi-family housing. Under this approach, the rule would cover renovations for compensation in all areas normally accessible to the children using the child-occupied facility. However, children under age 6 are likely to spend less time in the hallways and stairways of public or commercial buildings than they do in common areas in the buildings where they live. It is also likely that children under age 6 walking to and from a child care center in an office building, or to and from a classroom in a school building, will be closely supervised and will not be permitted to walk through active renovation work sites. Although some exposure is possible in these areas, they are more akin to general public and commercial buildings that children may enter but where they are not expected to spend significant amounts of time than to the exposures associated with child-occupied facilities, and EPA's hazard standards are applicable to residents and residential-type settings. In addition, EPA is concerned that application of this final rule to all common areas of public or commercial buildings that may house a child-occupied facility in a small portion of the building would likely result in minimal benefit to the children at a potentially large cost.

c. *Other public or commercial buildings.* A number of commenters noted that TSCA section 402(c)(3) directs EPA to address renovation or remodeling activities that create lead-based paint hazards not only in target housing, but also in public buildings constructed before 1978, and commercial buildings. Most of these commenters, commenting on the 2006 Proposal, expressed the greatest concern over EPA's failure to address buildings where young children spend significant amounts of time, or child-occupied facilities. However, a handful of commenters argued that EPA also needed to address other public and commercial buildings under the renovation, repair, and painting program.

TSCA section 402(c)(3) provides authority for EPA to regulate renovation or remodeling activities that create lead-based paint hazards. EPA has, by regulation under TSCA section 403, identified lead-based paint hazards for purposes of Title IV. These hazard standards were developed by evaluating exposure patterns and hazard information for young children and taking into account costs and benefits. They are only applicable in target housing and child-occupied facilities, places where young children are likely to be present for significant periods of time. Although EPA realizes that lead exposure for older children and adults can result in adverse health effects, effects which are discussed in chapter 5 of the Final Economic Analysis for the Lead Renovation, Repair, and Painting Program ("Final Economic Analysis") (Ref. 24), EPA has not evaluated the exposure and hazard information for these groups in the same way that it has for young children. EPA has not evaluated the potential adverse health effects and associated them with a specific level of surface dust that will result in a blood lead level in an older child or an adult that is likely to cause a particular adverse effect. Nor has EPA evaluated the potential health effects to young children from the less frequent exposures that might arise in public and commercial buildings that are not child-occupied facilities. At this time, EPA does not have sufficient information with which to conclude that renovation and remodeling activities in buildings not frequented by young children, e.g., public or commercial buildings that are not child-occupied facilities, create lead-based paint hazards because EPA's TSCA section 403 hazard standards only apply to target housing and child-occupied facilities. EPA has no hazard standards to apply in other situations. Thus, this rule, like the Lead-based Paint Activities Regulations, only applies in target housing and child-occupied facilities.

2. *Activities covered*—a. *Renovations for compensation.* This rule, like the Pre-Renovation Education Rule, only applies to persons who perform renovations for compensation. As discussed in the preamble to the 2007 Supplemental Proposal, for the purposes of this regulation, compensation includes pay for work performed, such as that paid to contractors and subcontractors; wages, such as those paid to employees of contractors, building owners, property management companies, child-occupied facility operators, State and local government agencies,

and non-profits; and rent for target housing or public or commercial building space.

Although the owner of rental property may not be compensated for maintenance and repair work at the time that the work is performed, tenants generally pay rent for the right to occupy rental space as well as for maintenance services in that space. Thus, renovations performed by renovation contractors and their employees in target housing or child-occupied facilities are covered, as are renovations by owners of rental target housing or child-occupied facilities, if the child-occupied facility leases space.

Renovations in target housing or in child-occupied facilities are covered if they are performed by employees of the renovation contractor, the building owner, the building manager, a State or local government agency, a non-profit organization, or the child-occupied facility operator, and the employees receive wages or other compensation for the work performed. Child care payments, in and of themselves, are not considered compensation for renovations. An agreement to provide child care in exchange for a payment is not a contract for building maintenance services in the same way that a lease or other agreement between a landlord and a tenant generally is.

One commenter requested that EPA consider payments for child care to be compensation for renovations. A number of other commenters expressed a general concern over the fact that EPA was not proposing to cover do-it-yourself renovations in owner-occupied target housing. Some of these commenters cited research or observations suggesting that improperly performed renovations by homeowners, relatives, or friends are equally likely, if not more likely, to cause elevated blood lead levels as renovations performed by professional contractors. The most commonly cited study for this proposition was the Wisconsin Childhood Blood-Lead Study, commissioned by EPA as Phase III of the Renovation and Remodeling Study performed pursuant to TSCA section 402(c)(2). As described more fully in the preamble to the 2006 Proposal, in homes where renovation and remodeling activities had been performed, the analysis of the results of the Wisconsin Study indicated the following ordering of the five possible responses to the question of who performed the renovation and remodeling, in order of highest to lowest risk of increased odds of an elevated blood lead level:

- Relative or friend not in household.
- Paid professional.
- Owner or building superintendent.
- Head of household or spouse.
- Other person in household.

As discussed in the preamble to the 2007 Supplemental Proposal, EPA does not believe that child-care payments represent compensation for renovations in the same way that rent is. Furthermore, as discussed in the Final Economic Analysis, the overwhelming majority of child-occupied facilities covered by this final rule are located in target housing. Some of that housing is rental target housing, and renovations in rental target housing are covered by this final rule regardless of whether a child-occupied facility is present. With respect to child-occupied facilities located in owner-occupied target housing and do-it-yourself renovations in owner-occupied target housing in general, EPA believes that it would be inconsistent with Congressional intent to cover these renovations.

EPA has previously determined that Congress was most concerned with the certification and training of contractors, not homeowners. In the preamble to the proposed Lead-based Paint Activities Regulations, EPA reviewed section 1021 of the Residential Lead-Based Paint Hazard Reduction Act of 1992, the section that added Title IV to TSCA, and determined that the emphasis under section 402 of TSCA ought to be the certification and training of contractors, not homeowners (Ref. 23). In its review, EPA declared that TSCA section 402(c)(3), the section under which this final rule is being issued, shows that Congressional “focus was on the need to regulate contractors doing renovation and remodeling activities, and not homeowners doing renovation and remodeling of their own homes” (Ref. 23). Specifically, TSCA section 402(c)(3) directs EPA to revise the 402(a) Lead-based Paint Activities Regulations to apply to renovation and remodeling activities. In so doing, EPA is to determine “which *contractors* are engaged in such activities.” TSCA section 402(c)(3) (emphasis added). EPA thus interprets the statutory directive to regulate remodeling and renovation activities found in TSCA section 402(c)(3) as applying to contractors and not a broader category of persons, such as homeowners.

With respect to do-it-yourself renovations in child-occupied facilities in target housing, as stated above, although payment is received in exchange for childcare, EPA does not consider this to be a contract for building maintenance. As discussed in the previous paragraph, Congress intended to cover renovation contractors, not homeowners who perform renovations on their own homes.

However, as previously discussed, EPA intends to conduct an outreach and education campaign designed to encourage homeowners and other building owners to follow lead-safe work practices while performing renovations or hire a certified renovation firm to do so.

b. *Definition of “renovation.”* The universe of renovation activities covered by this rule is virtually identical to the renovation activities already regulated under the Pre-Renovation Education Rule--essentially, activities that modify an existing structure and that result in the disturbance of painted surfaces. All types of repair, remodeling,

modernization, and weatherization projects are covered, including projects performed as part of another Federal, State, or local program, if the projects meet the definition of “renovation” already codified in 40 CFR 745.83.

As discussed in Unit IV.B.3. of the preamble to the 2006 Proposal, EPA considered a number of options for defining the term “renovation” for the Pre-Renovation Education Rule, and chose a definition that focuses on the activities of greatest concern to EPA, activities that disturb lead-based paint. This definition also covers virtually all of the types of activities in the Environmental Field Sampling Study that created lead-based paint hazards. In this rulemaking, EPA received several comments requesting clarification on the definition; some of these commenters were particularly interested in the types of jobs that would be covered by this definition. One commenter requested that, if EPA intended to cover maintenance and repair projects and interim control projects, the definition of “renovation” be modified to specifically include those projects. Another commenter requested that EPA specifically mention weatherization projects as an example of the types of projects covered by the rule. Several commenters suggested that the definition should clearly delineate the boundaries between renovation and abatement.

EPA also received several responses to its requests for comment on whether to exclude any category of specialty contractor and whether certain renovation activities, such as HVAC duct work, which may result in the disturbance of limited amounts of lead-based paint, should be specifically included or excluded. A state agency contended that exterior siding projects, HVAC duct work, and wallpaper removal should not be excluded, noting that wallpaper removal was implicated in a lead poisoning case the agency investigated. Another commenter argued that many interior and exterior painting projects involve washing, scuff-sanding, and scraping to remove loose materials, and that such “common” and “relatively benign” industry practices should not be regulated. Other commenters argued that there should be no categorical exemption for any type of specialty contractor. Most commenters on this issue contended that the amount of lead-based paint disturbed, rather than the type of project or contractor involved, should control the applicability of the rule.

EPA specifically disagrees that scuff-sanding and scraping are “benign,” especially in light of the dust lead levels generated by dry scraping in the Dust Study. The geometric mean post-work, pre-cleaning dust lead levels resulting from dry scraping were 2,686 $\mu\text{g}/\text{ft}^2$. After baseline cleaning procedures, the geometric mean was still 66 $\mu\text{g}/\text{ft}^2$. When the work practices required by the final rule were used, the geometric mean was 30 $\mu\text{g}/\text{ft}^2$. As stated above, all of the renovation activities in the Dust Study and the other studies in the record for this final rule created lead-based paint hazards. Therefore, this regulation will not exempt any category of specialty contractor or any specific type

of renovation. EPA notes, however, that it has not prohibited the use of dry scraping or dry hand sanding. More information on prohibited renovation practices can be found in Unit III.E.4. of this preamble. EPA also notes that some small jobs will be exempt from the requirements of this final rule under the minor repair and maintenance exception.

EPA has also determined that, based on the comments, some changes to the proposed definition of the term “renovation” are necessary to ensure that everyone understands that all types of building renovation, repair, and painting projects are covered, so long as painted surfaces are disturbed. The following definition of “renovation” will be incorporated into 40 CFR 745.83.

Renovation means the modification of any existing structure, or portion thereof, that results in the disturbance of painted surfaces, unless that activity is performed as part of an abatement as defined by this part (40 CFR 745.223). The term renovation includes (but is not limited to): The removal, modification or repair of painted surfaces or painted components (e.g., modification of painted doors, surface restoration, window repair, surface preparation activity (such as sanding, scraping, or other such activities that may generate paint dust)); the removal of building components (e.g., walls, ceilings, plumbing, windows); weatherization projects (e.g., cutting holes in painted surfaces to install blown-in insulation or to gain access to attics, planing thresholds to install weather-stripping), and interim controls. A renovation performed for the purpose of converting a building, or part of a building, into target housing or a child-occupied facility is a renovation under this subpart. The term renovation does not include minor repair and maintenance activities.

EPA added “repair,” “surface restoration,” “window repair,” “weatherization,” and “interim controls” to the definition to make it clear that all of these activities are covered by this definition if they disturb painted surfaces. EPA also separated the removal and the modification of building components to provide clarity. In addition, EPA provided examples of weatherization activities and building component removal. Finally, EPA added the last sentence to ensure that it is clear that renovations performed to turn a building into target housing or a child-occupied facility are covered.

Thus, interim control projects and weatherization projects that disturb painted surfaces are renovations. In addition, under this definition, the line between renovation and abatement is clear. Any renovation, repair, maintenance, or painting project is a renovation potentially covered by this rule unless the purpose of the project is to permanently eliminate lead-based paint or lead-based paint hazards. In that case, the project is an abatement. Covered renovations must be performed in accordance with 40 CFR part 745, subpart E, while covered abatements must be performed in accordance with 40 CFR part 745, subpart L.

3. *Exceptions*—a. *Owner-occupied target housing that is neither the residence of a child under age 6 or a pregnant woman, nor a child-occupied facility.* The 2006 Proposal proposed to establish an exception that would allow owner-occupants of target housing to opt-out of having renovation firms use the work practices that would be required by the rule. The proposed exception provided that if the owner-occupant signed a statement that no child under 6 resided there, the renovation would be exempt from the training, certification, and work practice requirements of the regulation. The 2007 Supplemental Proposal narrowed this exception. Under the 2007 Supplemental Proposal, owner-occupied target housing where no child under age 6 resides would not be eligible for this exception if the housing meets the definition of “child-occupied facility.” This final rule retains this exception, but further narrows it to exclude housing where pregnant women reside. In addition, to make it clear to the property owner what the effect of the signed statement is, EPA has modified the requirements to include an acknowledgment by the owner that the renovation firm will not be required to use the lead-safe work practices contained in EPA’s renovation, repair, and painting rule. Thus, unless the target housing meets the definition of a child-occupied facility, if an owner-occupant signed a statement that no child under 6 and no pregnant woman reside there and an acknowledgment that the renovation firm will not be required to use the lead-safe work practices contained in EPA’s renovation, repair, and painting rule, the renovation activity is exempt from the training, certification, and work practice requirements of the rule. Conversely, if the owner-occupant does not sign the certification and acknowledgement (even if no children under 6 or no pregnant women reside there), or if the owner-occupant chooses not to take advantage of the exception for other reasons, the exception does not apply and the renovation is subject to the requirements of this final rule.

EPA asked for and received numerous comments on this aspect of the 2006 Proposal. Several commenters supported EPA’s focus on housing where children under age 6 reside, citing the need to target society’s resources towards the housing that presents the greatest risk. One commenter also noted that this provision would help keep renovation costs down for low-income homeowners without children. Most commenters, however, did not agree with EPA’s proposal to allow homeowners with no children under age 6 who occupy their own homes to opt out of the rule’s requirements. These commenters cited a number of reasons for their position, including the fact that children visit homes where they do not reside, and newly renovated housing may be sold to a family with young children regardless of whether children were in residence when the renovation occurred. Commenters also expressed concern about pregnant women, given that the transplacental transfer of lead in humans is well documented, and infants are generally born with a lead body burden reflecting that of the mother. This led some commenters to suggest that women of child-

bearing age and girls between the ages of 6 and 14 also deserve special protection, because any lead body burden that they acquire through uncontrolled renovations will be passed on to any children they may eventually have.

EPA has carefully considered the issues and concerns raised with respect to exceptions to the rule. On the one hand, EPA agrees with the commenters that believed it was important to focus this regulation on the housing that presents the greatest risk to young children. EPA is mindful of the impacts this regulation may have on the affordability of renovations, particularly for low-income homeowners. EPA believes that primarily focusing society's resources on the housing that presents the greatest risk to children is consistent with Congressional intent. In the Senate report on Title X, Congress noted the need "for a flexible, targeted approach for protecting children from exposure to lead hazards while maintaining housing affordability" (Ref. 25). The report also noted that "exposure to lead is primarily caused by ingesting paint dust or chips," which is the route of exposure of concern primarily for young children, ages 18–27 months. Indeed, in the Congressional findings for Title X, Congress focused on the lead poisoning of children and the need to address this as a national priority. [Sec. 1002, Public Law 102–550]. The focus on children can also be inferred from the very definition of "target housing" which on the one hand excludes housing for the elderly and disabled "unless a child under six resides or is expected to reside" there. Similarly, this final rule focuses on the population most at risk and does not provide any exceptions if a child under age 6 resides in the target housing to be renovated.

On the other hand, EPA understands and shares some of the concerns expressed by those commenters who did not support an exception for owner-occupied target housing where no child under 6 resides. In balancing these countervailing considerations, EPA has further limited this exception to owner-occupied target housing that does not meet the definition of a child-occupied facility because no child under 6 is present on a regular basis and in which no pregnant women reside. This has the effect of focusing this regulation primarily on renovations performed in buildings where children under age 6 reside or spend a great deal of time or in which a pregnant woman resides.

With regard to older children and adults, it is important to remember that the hazards presented by a particular floor or windowsill dust lead level are markedly different for a toddler than for an older child or an adult. As discussed in EPA's most recent Air Quality Criteria for Lead document, hand-to-mouth behavior is an important means of exposure for children. The period of peak exposure, reflected in peak blood lead levels, is around 18–27 months when hand-to-mouth activity is at its maximum. This leads to a high rate of ingestion of dust at a time when children are believed to be particularly vulnerable to the neurological effects of lead exposure. While lead exposure continues

to affect older children and adults, these individuals do not ingest dust at the same high rate that a toddler does. Therefore, the same floor dust level will present a much greater hazard for the young child than it will for the older child or adult. The lead-based paint hazard standards in 40 CFR part 745, subpart D, were established with reference to impacts on childhood blood lead levels based principally on hand-to-mouth activity, and EPA has not assessed the effect of dust-lead levels or other potential sources of lead-based paint hazards on older children or adults.

However, EPA is particularly concerned about exposure to pregnant women because while the exposure patterns for small children and older children and adults are different, once exposed a pregnant woman can transfer lead to the developing fetus. Epidemiologic evidence indicates that lead freely crosses the placenta resulting in continued fetal exposure throughout pregnancy. Of particular concern is transfer to the developing brain of the fetus across the poorly developed blood brain barrier. Further, a significant proportion of lead transferred from the mother is incorporated into the developing skeletal system of the offspring, where it can serve as a continuing source of toxic exposure (Ref. 1). Thus, EPA agrees with the commenters who believed it is important to ensure that the work practices required in this final rule are followed in homes where a pregnant woman resides.

EPA also acknowledges the concern expressed by a number of commenters that newly-renovated housing will be sold to a family with young children. If the renovation was not performed in accordance with the work practices prescribed by this rule, a dust-lead hazard may be present in the home. However, EPA does not believe it is an effective use of society's resources to impose this final rule requirements on all renovations in order to account for the portion of homes without young children that will be sold to families with young children following renovations. Moreover, the Disclosure Rule, 40 CFR part 745, subpart F, requires sellers of target housing to disclose known lead-based paint or lead-based paint hazard information to purchasers and provide them with a copy of the lead hazard information pamphlet entitled "Protect Your Family from Lead in Your Home" (Ref. 6). In the situation described by the commenters, the receipt of this information should prompt the family to inquire about potential lead-based paint hazards in the home, particularly if one of the selling points is that areas of the home have been recently renovated. In addition, EPA continues to recommend that purchasers take advantage of their statutory opportunity to have a lead-based paint inspection or risk assessment done while in the process of purchasing target housing.

In response to comments expressing concern about this exception from this final rule, EPA has further considered the proposed owner-occupant acknowledgement statement and concluded that it is important that homeowners understand the effect of the acknowledgement. Accordingly, EPA has clarified and expanded the

acknowledgement language to ensure that it is clear and consistent. In addition, EPA would like to make it clear that even if the housing to be renovated qualifies for this exception, the homeowner may always choose to have the renovation firm follow the work practices required by this rule. For example, the homeowner may be concerned about potential exposures for visiting children who do not visit often enough to make the housing a child-occupied facility. The homeowner may also be concerned that she may be pregnant, even though she is not yet certain. EPA has added a statement to the sample acknowledgment form that would allow the homeowner to state that the housing does qualify for the exception, but the homeowner wishes the renovation firm to follow the requirements of this rule anyway.

EPA would like to reiterate that this exception applies only to target housing that is occupied by its owner. For a number of reasons, this exception is not available in rental target housing, whether young children are present or not. First, tenants are likely to have much less control over renovations in their housing than owners. Next, as pointed out by some commenters, there is more turnover in rental housing than in owner-occupied housing. In many cases, renovations are done between tenants and it may not be known who will be occupying the unit next. Finally, as noted by at least two commenters, exempting renovations in rental housing that is not occupied by a child under age 6 could cause discrimination in the rental housing market against families with young children. Nearly all of the commenters on this issue agreed with this approach.

Several commenters expressed reservations about the ability of renovation firms to determine whether housing to be renovated is eligible for this exception. As discussed in both proposals, EPA believes that it could be difficult for a renovation firm to determine whether a child under age 6 resides in a particular unit of target housing or whether the housing is a child-occupied facility or whether a woman is pregnant. EPA will therefore allow renovation firms to rely on a signed statement from the owner of the housing that he or she is the owner of the housing to be renovated, that he or she resides in the housing to be renovated, that no child under 6 or pregnant woman resides there, that the housing does not meet the definition of a child-occupied facility, and that the owner acknowledges that the renovation firm will not be required to use the lead-safe work practices contained in this final rule. In the absence of such a signed statement, the renovation firm must comply with all of the regulation's requirements. If the renovation firm obtains such a statement, the renovation firm is not subject to the work practice and other requirements of this final rule. EPA will not hold the renovation firm responsible for misrepresentations on the part of the owner of the housing. Renovations in common areas of owner-occupied multi-unit target housing, such as condominiums, must be performed in accordance with the requirements of this rule unless the renovation firm obtains a signed

statement from each occupant with access to the common area that the occupant is the owner of the housing unit, that he or she resides there, that no child under age 6 or pregnant woman resides there, that the housing does not meet the definition of child-occupied facility, and that the owner understands that the renovation firm will not be required to use the work practices contained in this final rule.

Finally, some commenters argued that TSCA section 402(c)(3) requires EPA to cover all renovations in target housing regardless of whether the housing is the residence of a child under age 6 or a child-occupied facility. This regulation covers all target housing. In order to perfect a claim for the exception for owner-occupied target housing that is not the residence of a child under age 6 or a pregnant woman or a child-occupied facility, the renovation firm must obtain the owner's signature on a form indicating that the housing qualifies for the exception and the owner is opting out of the training, certification, and work practice requirements of this rule. In addition, the form and regulation provide the option for a homeowner to request that the work conform to the requirements of this final rule even in homes without young children or pregnant women. EPA believes homeowners without young children or who reside in homes without pregnant women should be able to choose whether or not work done in their own homes conforms to the requirements of this final rule. EPA has determined that allowing these owner-occupants to opt out of the training, certification, and work practice requirements of the rule does not significantly compromise the safety and effectiveness of this rule because the limitations on the applicability of the exception with respect to children under 6 and pregnant women serve to minimize the possibility that a young child or a pregnant woman will be exposed to a lead-based paint hazard resulting from a renovation in target housing.

b. *Renovations affecting only components free of regulated lead-based paint*—i. *Determination by certified inspector or risk assessor.* In keeping with the 2006 Proposal and the 2007 Supplemental Proposal, this final rule exempts renovations that affect only components that a certified inspector or risk assessor has determined are free of paint or other surface coatings that contain lead equal to or in excess of 1.0 mg/cm² or 0.5% by weight. These standards are from the definition of lead-based paint in Title X and in EPA's implementing regulations. Nearly all of the commenters that expressed an opinion on this topic favored this exception. The determination that any particular component is free of lead-based paint may be made as part of a lead-based paint inspection of an entire housing unit or building, or on a component-by-component basis.

Some commenters expressed confusion over the mechanics of this exception. The certified inspector or risk assessor determines whether components contain lead-based paint, while the renovation firm is responsible for determining which components will be affected by the

renovation. A renovation firm may rely on the report of a past inspection or risk assessment that addresses the components that will be disturbed by the renovation.

ii. *Determination by certified renovator using EPA-recognized test kits.* Also in accordance with both of the proposals, this final rule exempts renovations that affect only components that a certified renovator, using a test kit recognized by EPA, determines are free of lead-based paint. EPA has deleted the regulatory thresholds for lead-based paint from this definition because they unnecessarily complicate the exception. As discussed in Unit III.C.1. of this preamble, a certified renovator is a person who has taken an accredited course in work practices. This training will include how to properly use the EPA-approved test kits. This final rule also establishes the process EPA will use to recognize test kits.

As discussed in the preamble to the 2006 Proposal, research on the use of currently available kits for testing lead in paint has been published by the National Institute of Standards and Technology (NIST) (Ref. 26). The research indicates that there are test kits on the market that, when used by a trained professional, can reliably determine that regulated lead-based paint is not present by virtue of a negative result. Based on this research, EPA proposed to initially recognize test kits that have, for paint containing lead at or above the regulated level, 1.0 mg/cm² or 0.5% by weight, a demonstrated probability (with 95% confidence) of a negative response less than or equal to 5% of the time.

Some commenters, representing a variety of interests, supported an exception for renovations affecting components that have been found to be free of regulated lead-based paint by use of a test kit. One commenter cited the need for faster and cheaper methods of accurately checking for lead and expressed the opinion that this approach will expand access to lead screening in homes. Several comments were generally supportive, with some reservations about kit reliability.

However, most commenters did not favor the use of test kits. The most commonly cited reason for not supporting this approach was the potential conflict-of-interest present in having the certified renovator be the one to determine whether or not he or she must use the work practices required by the rule. EPA addressed potential conflicts-of-interest in its lead-based paint program in the preamble to the final Lead-based Paint Activities Regulations. That discussion outlined two reasons for not requiring that inspections or risk assessments, abatements, and post-abatement clearance testing all be performed by different entities. The first was the cost savings and convenience of being able to hire just one firm to perform all necessary lead-based paint activities. The second was the potential regional scarcity of firms to perform the work. These considerations may also be applicable to the renovation sector, given the premium on maintaining a rule that is simple and streamlined and does not unduly prolong the timeframes

for completing renovations. Moreover, it is not unusual in regulatory programs to allow regulated entities to make determinations affecting regulatory applicability and compliance. See, e.g., 40 CFR 262.11 (hazardous waste determinations by waste generators under RCRA). EPA has decided to take an approach that is consistent with the approach taken in the 402(a) lead-based Paint Activities regulation and not require third party testing.

Another commonly cited reason for not supporting the use of test kits by certified renovators was the lack of any sampling protocol in the regulation. A related concern was that the training in sampling techniques and protocols in the lead-based paint inspector course could not be shortened to fit within the 8-hour renovator course and still retain all of the necessary information. EPA wishes to make it clear that the 8-hour renovator course will not train renovators in how to select components for sampling because the certified renovator must use a test kit on each component affected by the renovation. The only exception to this is when the components make up an integrated whole, such as the individual stair treads and risers in a staircase. In this situation, the renovator need test only one such individual component, e.g., a single stair tread, unless it is obvious to the renovator that the individual components have been repainted or refinished separately.

As such, a complicated sampling protocol is not necessary. EPA plans to modify the EPA/HUD Lead Safe Work Practices course to include training on how to use a test kit. To ensure that the applicability of the exception is clear, EPA has also modified 40 CFR 745.82(a)(2) to specifically state that the certified renovator must test each of the components that will be affected by the renovation.

iii. *Phased implementation and improved test kits.* Under the proposals, the regulatory requirements would have taken effect in two major stages, based on the age of the building being renovated. The first stage would have applied to renovations in target housing and child-occupied facilities built before 1960. Requirements for renovations in target housing and child-occupied facilities built between 1960 and 1978 would have taken effect 1 year later. The primary reason for this phased implementation was to allow time for the development of improved test kits.

According to the National Survey of Lead and Allergens in Housing, 24% of the housing constructed between 1960 and 1978 contains lead-based paint (Ref. 27). In contrast, 69% of the housing constructed between 1940 and 1959, and 87% of the housing constructed before 1940 contains lead-based paint. The results of this survey indicate that there is a much greater likelihood of disturbing lead-based paint during a renovation that occurs in a home built before 1960 than in a home built after that date. The NIST research on existing test kits shows that existing test kits cannot reliably determine that lead is present in paint only above the statutory levels because the kits are sensitive to lead at levels below the Federal standards that define lead-based paint, and therefore are prone to a large number of false positive results (i.e., a positive result when regulated lead-based paint is, in fact, not present). The NIST research found that such false positive rates range from 42% to 78%. This means that the currently available kits

are not an effective means of identifying the 76% of homes built between 1960 and 1978 that do not contain regulated lead-based paint.

Research conducted by EPA subsequent to the publication of the 2006 Proposal confirms that the sensitivity of test kits could be adjusted for paint testing so that the results from the kits reliably correspond to one of the two Federal standards for lead-based paint, 1.0 mg/cm² and 0.5% by weight. EPA's research and initial contacts with potential kit manufacturers also indicate that this can be accomplished in the near future. As stated in the preamble to the 2006 Proposal, EPA's goal is to foster the development of a kit that can reliably be used by a person with minimal training, is inexpensive, provides results within an hour, and is demonstrated to have a false positive rate of no more than 10% and a false negative rate at 1.0 mg/cm² or 0.5% by weight of less than 5%. EPA is confident that improved test kits meeting EPA's benchmarks will be commercially available by September 2010.

With this in mind, EPA felt that a staged approach would initially address the renovations that present the greatest risks to children under age 6, i.e., the renovations that are most likely to disturb lead-based paint, while allowing additional time to ensure that the improved test kits are commercially available before phasing in the applicability of the rule to newer target housing and child-occupied facilities. However, EPA was concerned about delaying implementation for post-1960 target housing and child-occupied facilities that are occupied or used by children under age 6 with increased blood lead levels. In order to reduce the possibility that an unregulated renovation activity would contribute to continuing exposures for these children, the 2006 Proposal would have required renovation firms, during the first year that the training, certification, work practice and recordkeeping requirements are in effect, to provide owners and occupants of target housing built between 1960 and 1978 and child-occupied facilities built between 1960 and 1978 the opportunity to inform the firm that the building to be renovated is the residence of, or is a child-occupied facility frequented by, a child under age 6 with a blood lead level that equals or exceeds the CDC level of concern, or a lower State or local government level of concern. If the owner or occupant informs the renovation firm that a child under age 6 with an increased blood lead level lives in or frequents the building to be renovated, the renovation firm must comply with all of the training, certification, work practice, and recordkeeping requirements of this regulation.

Some commenters agreed that a staged approach was probably necessary, given the number of renovations that would be covered by the rule, and that a focus on buildings built before 1960 was appropriate. However, most commenters objected to the phased implementation. Some were concerned about the potential exposures to children in buildings built between 1960 and 1978 during the first stage of the rule. Another major concern expressed by commenters was that the phased implementation would unnecessarily complicate the

rule, especially with the provision relating to children under age 6 with increased blood lead levels. These commenters felt that, because there already are accurate methods for determining whether a building contains lead-based paint, and because renovation firms ought to get into the habit of working in a lead-safe manner whenever they are working on a building built before 1978, the utility of the delay does not outweigh the likely confusion in the regulated community. Commenters also expressed reservations about providing sensitive medical information to contractors, in the case of children under age 6 with increased blood lead levels.

After reviewing the comments and weighing all of the factors, including EPA's expectation that the improved test kits will be commercially available by September 2010, EPA has decided not to include a phased implementation in this rulemaking. Therefore, this regulation will take effect at the same time for target housing and child-occupied facilities regardless of whether they were built before or after 1960. Nonetheless, if the improved test kits are not commercially available by September 2010, EPA will initiate a rulemaking to extend the effective date of this final rule for 1 year with respect to owner-occupied target housing built after 1960.

iv. *Test kit recognition process.* In the 2006 Proposal, EPA described proposed criteria for test kit recognition. Specifically, for paint containing lead at or above the regulated level, 1.0 mg/cm² or 0.5% by weight, EPA stated its intention to only recognize kits that have a demonstrated probability (with 95% confidence) of a negative response less than or equal to 5% of the time. In addition, as soon as the improved test kits are generally available, EPA proposed to recognize only those test kits that have a demonstrated probability (with 95% confidence) of a false positive response of no more than 10% to lead in paint at levels below the regulated level. EPA stated its belief that limiting recognition to kits that demonstrate relatively low rates of false positives would benefit the consumer by reducing the number of times that the training and work practice requirements of this regulation are followed in the absence of regulated lead-based paint. EPA also proposed to require that these performance parameters be validated by a laboratory independent of the kit manufacturer, using ASTM International's E1828, Standard Practice for Evaluating the Performance Characteristics of Qualitative Chemical Spot Test Kits for Lead in Paint (Ref. 28) or an equivalent validation method. In addition, the instructions for use of any particular kit would have to conform to the results of the validation, and the certified renovator would have to follow the manufacturer's instructions when using the kit. EPA requested comment on whether these standards are reasonably achievable and sufficiently protective. EPA also solicited input on how to conduct the kit recognition process.

Some commenters expressed reservations about the proposed performance criteria, contending that a false negative rate of 5% is too

high to be protective. However, a 5% false negative rate (with 95% confidence) is similar to the performance requirements for other lead-based paint testing methods, such as laboratory analysis used for lead-based paint inspections, and is considered to be the statistical equivalent of zero. Therefore, this final rule retains the proposed false-negative criteria for test kit recognition, i.e., for paint containing lead at or above the regulated level, 1.0 mg/cm² or 0.5% by weight, kits will be only recognized if they have a demonstrated probability (with 95% confidence) of a negative response less than or equal to 5% of the time. Because no comments were received on the proposed false-positive criteria of 10% for the improved test kits, this final rule also retains the proposed false-positive criteria for the improved kits, i.e., after the improved kits are available, the only test kits that will be recognized are those that have a demonstrated probability (with 95% confidence) of a false positive response of no more than 10% to lead in paint at levels below the regulated level.

EPA did not receive any comments or suggestions on the test kit recognition process itself. With respect to existing test kits, EPA has determined that the NIST research (Ref. 26) is the equivalent of an independent laboratory validation of test kit performance. The NIST research found that three kits met the false-negative criteria established in this final rule. For the purposes of this regulation, EPA will therefore recognize these test kits, provided that they still use the same formulation that was evaluated by NIST. These test kits will be recognized by EPA until EPA publicizes its recognition of the first improved test kit.

With respect to the improved test kits, EPA has determined that Environmental Technology Verification Program (ETV) is a suitable vehicle for obtaining independent laboratory validation of test kit performance. EPA intends to use ETV or an equivalent testing program approved by EPA for the test kit recognition process. The goal of the ETV Program is to provide independent, objective, and credible performance data for commercial-ready environmental technologies. The ETV process promotes these technologies implementation for the benefit of purchasers, permittees, vendors and the public. If ETV is used, EPA would utilize the Environmental and Sustainable Technology Evaluations (ESTE) element of the ETV program because the development of the test kits is in support of this final rule, and the ESTE element was created in 2005 to address Agency priorities such as rule making. More information on this program is available on EPA's website at <http://www.epa.gov/etv/index.html>.

In the 2006 Proposal, EPA noted that it would look to ASTM International's E1828, Standard Practice for Evaluating the Performance Characteristics of Qualitative Chemical Spot Test Kits for Lead in Paint (Ref. 29) or equivalent for a validation method for test kits. With the input of stakeholders, EPA is adapting this ASTM Standard for use in the laboratory validation program. The testing protocol will consist of

an evaluation of the performance of the test kits, using the manufacturer's instructions, on various substrates, such as wood, steel, drywall, and plaster, with various lead compounds, such as lead carbonate and lead chromate, at various lead concentrations above and below regulatory threshold for lead-based paint. To be consistent with the performance criteria of the National Lead Laboratory Accreditation Program, the testing protocol will not involve testing the performance of the kits on paint that contains between 0.8 milligrams of lead per square centimeter and 1.2 milligrams of lead per square centimeter. After a test kit has gone through the ETV or other EPA approved testing process, EPA will review the test report to determine whether the kit has been demonstrated to achieve the criteria set forth in the rule. EPA anticipates that evaluation of the improved test kits under the recognition program will begin by August 2009.

In addition, EPA intends to allow other existing test kit manufacturers the opportunity to demonstrate that their kits meet the false negative criteria described in 40 CFR 745.88(c)(1) by going through the ETV process. Any recognition granted to test kits based only on the false negative criteria will expire when EPA publicizes its recognition of the first improved test kit that meets both the false negative and false positive criteria of 40 CFR 745.88(c).

Beginning on September 1, 2008, EPA's ETV program will accept applications for testing from test kit manufacturers. Applications must be submitted, along with a sufficient number of kits and the instructions for using the kits, to EPA. The test kit manufacturer should first visit the following website for information on where to apply: <http://www.epa.gov/etv/howtoapply.html>.

c. Minor repair and maintenance. EPA proposed to incorporate into this regulation the minor maintenance exception for the Pre-Renovation Education Rule. The proposed minor maintenance exception would have applied to projects that disturb 2 ft² or less of painted surface per component. The preamble to the 2006 Proposal discusses the history of this exception and requested comment on potential changes. In particular, EPA noted that HUD's Lead Safe Housing Rule, at 20 CFR 35.1350(d), includes a *de minimis* exception for projects that disturb 2 ft² or less of painted surface per room for interior projects, 20 ft² or less of painted exterior surfaces, and 10% or less of the total surface area on an interior or exterior type of component with a small surface area. If less than this amount of painted surface is disturbed, HUD's lead-safe work practice requirements do not apply. EPA's lead-based Paint Activities Regulation incorporates this as an exception for small projects at 40 CFR 745.65(d). EPA requested comment on whether the minor maintenance exception in this regulation should be consistent with other EPA regulations and the HUD Lead Safe Housing Rule. This provision describes the applicability of the Pre-Renovation Education Rule as well as this final rule.

Most commenters expressed support for consistency in the various lead-based paint regulations administered by EPA and HUD. They noted that a consistent exception for small projects or minor maintenance would be easier for the regulated community to apply. Many of these commenters recommended 2 ft² for interior projects and 20 ft² on exterior surfaces. While some commenters supported a “per component” exception, several commenters specifically noted that the “per component” aspect of the existing Pre-Renovation Education Rule exception was problematic in that it could result in the disturbance of large areas of painted surfaces in a single room. Other commenters recommended that the threshold area for the exception be made smaller or the exception abolished. These commenters noted that even very small projects have the potential to create lead-based paint hazards and that, rather than worrying about the applicability of the exception, renovation firms should just get into the habit of performing every project in a lead-safe manner. Other commenters suggested that EPA consider a larger threshold area for the exception, or an exception based on other factors, such as time spent performing an activity. EPA recognizes that, depending upon the methods used to disturb lead-based paint, very small disturbances can release a great deal of lead. EPA also understands the practicality of a minor maintenance exception.

In weighing these competing considerations, EPA has decided to incorporate in this final rule a minor maintenance exception for projects that disturb 6 ft² or less of painted surface per room for interiors and 20 ft² or less of painted surface on exteriors. This addresses the concerns of those commenters who supported a “per component” exception while still limiting the overall amount of paint that can be disturbed in a single room during a single project. As in the 2006 Proposal, this exception is not available for window replacement projects. In contrast to the Proposal, this exception is only available for projects that do not use any of the work practices prohibited or restricted by 40 CFR 745.85(a)(3) and that do not involve demolition of painted surface areas.

EPA remains convinced that the distinction between renovation and minor maintenance activities is an important part of implementing this program. Congress directed EPA to address renovation and remodeling. In ordinary usage, minor maintenance activities that might disturb lead-based paint (e.g., removing a face plate for an electric switch to repair a loose connection, adding a new cable TV outlet, or removing a return air grill to service the HVAC system) are not normally considered home renovations. EPA believes that minor repair and maintenance activities that cover 6 ft² or less per room and 20 ft² or less for exteriors and that do not involve prohibited practices, demolition or window replacement would not ordinarily be considered renovation or remodeling but would better be described as minor work on the home or COF. EPA also believes that a typical minor repair and maintenance activity would not normally involve the use of high dust

generating machinery such as those prohibited or restricted by this rule. To make the distinction between renovations and minor repair and maintenance activities clear, EPA has added a definition of “minor repair and maintenance activities” to 40 CFR 745.83. This term is defined as follows:

Minor repair and maintenance activities” are activities, including minor heating, ventilation or air conditioning work, electrical work, and plumbing, that disrupt 6 square feet or less of painted surface per room for interior activities or 20 square feet or less of painted surface for exterior activities where none of the work practices prohibited or restricted by § 745.85(a)(3) are used and where the work does not involve window replacement or demolition of painted surface areas. When removing painted components, or portions of painted components, the entire surface area removed is the amount of painted surface disturbed. Jobs, other than emergency renovations, performed in the same room within the same 30 days must be considered the same job for the purpose of determining whether the job is a minor repair and maintenance activity.

To accommodate this new definition of “minor repair and maintenance activities,” the definition of “renovation” in § 745.83 has also been changed to include the following sentence: “The term renovation does not include minor repair and maintenance activities.” As a result of these two definitional changes, the reference to minor maintenance in 40 CFR 745.82(a)(1) is no longer necessary. Therefore, when engaged in minor repair and maintenance activities as defined in 40 CFR 745.83, renovation firms and renovators are not covered by this rule. EPA believes this approach--eliminating the per-component limitation in favor of an overall size cap, and prohibiting practices that EPA believes are inconsistent with minor maintenance work and that generate very high lead dust loadings--is a reasonable balance of the considerations identified by commenters and considered by EPA.

Several commenters expressed concerns about how the exception would be applied, and whether various activities would be covered by the rule or exempt under the minor maintenance exception. Window replacement was of interest to several commenters, who referred to EPA’s previous guidance on window replacement under the Pre-Renovation Education Rule (Ref. 28). That guidance states that window replacement, for various reasons, cannot qualify for the minor maintenance exception. EPA knows of no reason why this interpretation should be changed. In fact, contrary to the assertions of some commenters, the Dust Study found that window replacement was one of the more hazardous jobs. The geometric mean of the lead content of floor dust samples taken in the work area after the window replacement projects was 3,003 $\mu\text{g}/\text{ft}^2$ (Ref. 17, at 6-11). In addition, EPA does not believe that window replacement is within the common understanding of the meaning of either minor repair or maintenance. EPA has specifically included language in the definition of “minor repair and maintenance activities” to make it clear that window replacements cannot qualify.

Two commenters contended that, when determining whether wall or ceiling cut-outs exceed the minor maintenance exception, the painted surface disturbed should be measured by multiplying the length of the cut by its width, as opposed to the total size of the cut-out. EPA disagrees with these commenters. For cut-outs, the calculation is made for the entire area of surface being disturbed, e.g., the area of the cut-out, for the following reasons:

- The removed portion can flex or be broken during the removal process and the paint can flake off;
 - The removed portion can fall on the floor and be trampled upon;
- or
- The removed portion may not be removed as a single piece.

Calculating the amount of painted surface disturbed in the manner that the commenters suggested would also complicate the rule and be more difficult to convey during the renovator training course. In response to these comments, EPA has inserted clarifying language on this into the text of the definition of “minor repair and maintenance activities” at 40 CFR 745.83.

One commenter recommended that EPA prohibit splitting work, i.e., conducting a single project as several minor maintenance activities in the same room in a short time (like a month) in order to avoid the regulatory requirements. EPA agrees with this commenter. It has always been EPA’s interpretation of the Pre-Renovation Education Rule that renovators could not artificially split up projects in order to avoid having to provide the pamphlet. In response to this comment, EPA has inserted clarifying language on this into the definition of “minor repair and maintenance activities” at 40 CFR 745.83. This definition states that jobs, other than emergency renovations, performed in the same room within the same 30 days must be considered the same job for the purpose of determining whether the job is a minor repair and maintenance activity.

d. *Emergency projects.* Both the 2006 Proposal and the 2007 Supplemental Proposal proposed to retain the emergency project exception in the Pre-Renovation Education Rule with one modification. EPA proposed to clarify that interim control projects performed on an expedited basis in response to an elevated blood lead level finding in a resident child qualify for the emergency project exception from the Pre-Renovation Education Rule requirements. As discussed in the 2006 Proposal, EPA was concerned that local public health organizations may be delayed in responding to a lead-poisoned child if the owner of the building where the child resides is not available to acknowledge receipt of the lead hazard information pamphlet before an interim control project begins. In addition, EPA recognized that some emergencies could make it difficult to comply with all of the training, certification, work practice, and recordkeeping requirements. For

example, a broken water pipe may make it impossible to contain the work area before beginning to disturb painted surfaces to get to the pipe. The proposed emergency project exception would have required firms to comply with the work practice, training, certification, and recordkeeping requirements to the extent practicable.

EPA received a number of comments on this aspect of the 2006 Proposal. Several recognized the need for such an exception, but most of the commenters were concerned that the language of the proposal would make it possible for renovation firms to circumvent the training, certification, and work practice controls when performing interim controls in response to a child with an elevated blood lead level. A number of these commenters, as well as several others, urged EPA to be more specific about which requirements could be bypassed in particular situations. EPA agrees with these commenters. It never was EPA's intention to allow firms performing interim controls in response to a poisoned child to use untrained workers or work in a manner not consistent with the work practices required by this rule.

EPA has therefore revised the exception to specifically state that interim controls performed in response to a child with an elevated blood lead level are only exempt from the information distribution requirements, which is consistent with the current Pre-Renovation Education Rule. EPA has also modified the exception to state that emergency renovations are only exempt to the extent necessary to respond to the emergency from the training, certification, sign posting, and containment requirements of this regulation. For example, most property management companies who do their own maintenance are likely to have at least one trained and certified renovator on staff to perform renovations, so these companies should be able to comply with the training and certification requirements on all renovations. Likewise, firms performing emergency renovations should be able to follow the required cleaning procedures after emergency repairs have been made. As such, under the final rule, in all cases the cleaning specified by the regulation must be performed and it must be performed or directed by certified renovators. In addition, in all cases, the cleaning verification requirements of this regulation must be performed and they must be performed by a certified renovator. In response to one commenter who requested that EPA require firms to document their inability to comply with all of the regulatory provisions in emergencies, EPA has included such a requirement in 40 CFR 745.86(b)(7). Finally, EPA has removed the word "operations" from the exception, in response to one commenter who suggested that the word is unnecessary and confusing. EPA agrees that the word "operations" is unnecessary in its description of emergency renovations. EPA intends to continue interpreting the term "emergency renovations" in the same way that it always has done, except that EPA has clarified that interim controls performed in response to a child with an elevated blood-lead level can be an emergency renovation.

B. Pre-Renovation Education

The Pre-Renovation Education Rule, promulgated pursuant to TSCA section 406(b) and codified at 40 CFR part 745, subpart E, requires renovators to provide owners and occupants of target housing with a lead hazard information pamphlet before beginning a renovation in the housing (Ref. 8). The pamphlet currently used for this purpose, “Protect Your Family From Lead in Your Home,” was developed in accordance with TSCA section 406(a) and includes useful information on lead-based paint and lead-based paint hazards in general. This pamphlet is also used to provide lead hazard information to purchasers and renters of target housing under the Requirements for Disclosure of Information Concerning lead-Based Paint in Housing “Lead Disclosure Rule” (Ref. 30).

1. *New renovation-specific pamphlet.* EPA has developed a new lead hazard information pamphlet that addresses renovation-specific lead exposure concerns. The development of this pamphlet, including the public comments received on the format and content, is discussed in greater detail in a separate notice published elsewhere in today’s **Federal Register**. This new renovation-specific pamphlet, entitled *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools* will better inform families about the risks of exposure to lead-based paint hazards created during renovations and promote the use of work practices and other health and safety measures during renovation activities (Ref. 31). This new pamphlet gives information on lead-based paint hazards, lead testing, how to select a contractor, what precautions to take during the renovation, and proper cleanup activities, while still incorporating the information already included in the original “Protect Your Family From Lead In Your Home” and mandated by section 406(a) of TSCA.

In the 2006 Proposal, EPA proposed to require renovation firms to distribute the new renovation-specific pamphlet (then titled *Protect Your Family From Lead During Renovation, Repair & Painting*) instead of the pamphlet currently used for this purpose (*Protect Your Family From Lead in Your Home*). In general, most commenters were supportive of a requirement to distribute a new renovation-specific pamphlet for the purposes of TSCA section 406(b). One commenter stated a belief that the existing *Protect Your Family From Lead in Your Home* pamphlet had served its purpose well and the development of a new pamphlet should not be a priority. EPA agrees with the commenters who recognized the merit of providing renovation-specific information to owners and tenants before renovations commence. Therefore, this final rule will require renovation firms to distribute the new *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools*; pamphlet before beginning renovations. This requirement to use the new pamphlet will become effective as discussed in Unit III.H. of this preamble.

2. *Information distribution requirements.* Other than the use of the new renovation-specific pamphlet, EPA did not specifically propose any changes to the existing information distribution requirements for target housing that does not meet the proposed definition of “child-occupied facility.” One commenter contended that the existing information distribution requirements for multi-family target housing were extremely burdensome and resulted in tenants being given multiple notifications and copies of the lead hazard information pamphlet over the course of a year’s time. This commenter requested that EPA modify the regulations to allow an annual distribution of renovation-related lead hazard information to tenants. However, as noted in interpretive guidance previously issued on the Pre-renovation Education Rule, EPA, in developing the final Pre-renovation Education Rule, carefully weighed whether a one-time pamphlet distribution would be adequate to meet the objectives of section 406(b) of the lead statute, and concluded that many, if not most, tenants would benefit from receiving the information in the lead pamphlet closer to the time that a renovation is to begin. Although some tenants may read lead information delivered on a “for-your-information” basis, many others are not likely to focus on potential lead hazards until a renovation affecting their unit is imminent, and would welcome receiving information on protecting their families from lead in a more timely fashion. Therefore, EPA has determined that an annual distribution of renovation-specific lead hazard information would not be an effective means of providing timely information to tenants.

However, with respect to renovations in common areas, EPA has determined that there are other effective ways of delivering lead hazard information to tenants in a timely manner. Specifically, the posting of informational signs during the renovation in places where the tenants of the affected units are likely to see them will provide these tenants with the information they need at the time that they need it. Depending upon the circumstances, renovation firms may find the posting of such signs to be less burdensome than mailing or hand-delivering this information to affected tenants. Indeed sign posting may be more effective than mail since it provides an immediate reminder. Therefore, EPA will allow renovation firms performing renovations in common areas of multi-unit target housing the option of mailing or hand-delivering general information about the renovation and making a copy of the pamphlet available to the tenants of affected units upon request prior to the start of the renovation, or posting informational signs while the renovation is ongoing. These signs must be posted where they are likely to be seen by all of the tenants of the affected units and they must contain a description of the general nature and locations of the renovation and the anticipated completion date. The signs must be accompanied by a posted copy of the pamphlet or information on how interested tenants can review or obtain a copy of the pamphlet at no cost to the tenants.

One commenter expressed concern about tenants either not seeing the “postings” because they use different entrances or distinguishing the renovation-specific lead hazard information “postings” from other “postings” in the general area. To take advantage of this option, this final rule requires renovation firms to use actual signs, not notices on tenant bulletin boards. In addition, these signs must be posted where the tenants of all of the affected units can see them. If the tenants of the affected units use several different entrances, a sign posted by one of the entrances would not be sufficient.

With respect to renovations in individual housing units, whether single family or multi-family, firms performing renovations for compensation in target housing must continue to distribute a lead hazard information pamphlet to the owners and tenants of the housing no more than 60 days before beginning renovations. This requirement, along with the associated requirements to obtain acknowledgments or document delivery, has not changed. For renovations in the common areas of multi-unit target housing, firms must provide tenants with general information regarding the nature of the renovation and make the pamphlet available upon request, by mailing, hand-delivery, or posting informational signs. Firms must also maintain documentation of compliance with these requirements. The 2007 Supplemental Proposal contained additional proposed information distribution requirements for child-occupied facilities in target housing and in public and commercial buildings. This final rule incorporates those additional requirements.

Also, as proposed in the 2006 Proposal, this final rule deletes the existing 40 CFR 745.84 because it is duplicative. The section provided some details on submitting CBI and how EPA will handle that information. However, comprehensive regulations governing sensitive business information, including CBI under TSCA, are codified in 40 CFR part 2. The regulations in 40 CFR part 2 set forth the procedures for making a claim of confidentiality and describe the rules governing EPA’s release of information. EPA received no comments on the proposed deletion of 40 CFR 745.84. Therefore, EPA is deleting this section and redesignating existing 40 CFR 745.85 as 40 CFR 745.84.

EPA is also taking this opportunity to reiterate who is responsible for complying with the information distribution responsibilities of 40 CFR 745.84. This provision of this final rule includes the existing Pre-Renovation Education Rule information distribution requirements as amended to include requirements applicable to child-occupied facilities. In interpretive guidance issued for the Pre-Renovation Education Rule, EPA shed additional light on the issue of who is responsible for complying with the information distribution requirements, particularly for renovation projects where multiple contractors are involved (Ref. 32). EPA stated that if the renovation is overseen by a general contractor, the general contractor is considered to be the “renovator” under the rule and is therefore responsible for

ensuring that the information distribution requirements are met. EPA further stated that it would not consider a subcontractor to be a “renovator” for purposes of the Pre-Renovation Education Rule so long as the subcontractor has no direct contractual relationship with the property owner or manager relating to the particular renovation. EPA’s reasoning is that the information distribution requirements should be fulfilled by the person or entity with which the customer enters into the contract and compensates for the work--even if that work is subsequently contracted out.

This final rule changes the existing definition of “renovator” to refer specifically to the individual trained in work practices as distinct from the renovation firm. The final rule also specifies in 40 CFR 745.84 that the renovation firm is responsible for carrying out the information distribution requirements. Renovation firms may find it more efficient to have someone other than the certified renovator distribute the pamphlet and obtain the acknowledgement forms. In changing the definition of “renovator,” EPA is not changing its policies as to which entity, between a contractor and subcontractor, is responsible for carrying out the information distribution requirements. On the contrary, as to this issue, EPA intends to continue interpreting the regulatory responsibility for the information distribution requirements as it has in the past.

a. *Owners and occupants of public or commercial buildings containing a child-occupied facility.* The Pre-Renovation Education Rule covers only renovations in target housing. Thus, the information distribution requirements summarized in the preceding paragraph have not historically applied to firms performing renovations for compensation in public or commercial buildings. In the 2007 Supplemental Proposal, EPA proposed to require firms performing renovations for compensation in child-occupied facilities in public or commercial buildings to provide a lead hazard information pamphlet to the owner of the building as well as to an adult representative of the child-occupied facility, if the owner of the building and the child-occupied facility are different entities. This requirement was modeled on the Pre-Renovation Education Rule’s requirements for pamphlet distribution in rental target housing. As described in the 2007 Supplemental Proposal, EPA has determined, in accordance with TSCA section 407, that the distribution of lead hazard information, before renovation projects begin, to an adult representative of the child-occupied facility as well as to the owners of public or commercial buildings that contain child-occupied facilities is necessary to ensure effective implementation of this regulation. EPA believes that information on lead-based paint hazards, and lead-safe work practices that minimize the creation of hazards, will stimulate interest on the part of child-occupied facilities and public or commercial building owners in these work practices and increase the demand for their use.

EPA received no comments on this aspect of the 2007 Supplemental Proposal. Therefore, the final rule includes this requirement as proposed. Renovation firms performing renovations for compensation in a child-occupied facility in a public or commercial building must provide the lead hazard information pamphlet entitled “Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools” to the owner of the building. The renovation firm must either obtain written acknowledgment from the owner that the pamphlet was delivered or obtain a certificate of mailing for the pamphlet at least 7 days prior to the start of the renovation. In addition, the renovation firm must provide the pamphlet to an adult representative of the child-occupied facility if the facility and the building are owned by different entities. To document compliance with this requirement, the renovation firm must do one of the following:

- Obtain a written acknowledgment of pamphlet delivery from the adult representative of the child-occupied facility;
- Obtain a certificate of mailing for the pamphlet at least 7 days prior to the start of the renovation; or
- Certify in writing that the pamphlet has been delivered to the child-occupied facility and the firm has been unsuccessful in attempting to obtain the signature of an adult representative of the child-occupied facility. This certification must contain the reason for the failure to obtain the signature.

b. *Parents and guardians of children under age 6 using a child-occupied facility.* The 2007 Supplemental Proposal would also have required a renovation firm performing a renovation for compensation in a child-occupied facility to provide information about the renovation to the parents and guardians of children under age 6 using the facility. This proposed requirement was designed to be comparable to the Pre-Renovation Education Rule provisions for informing adult occupants (who are not owners). EPA is finalizing this requirement as proposed. The renovation firm must either mail each parent or guardian the lead hazard information pamphlet and a general description of the renovation or post informational signs where parents and guardians would be likely to see them. The signs must be accompanied by a posted copy of the pamphlet or information on how to obtain the pamphlet at no charge to interested parents or guardians. This requirement applies to renovations in child-occupied facilities in target housing as well as to renovations in child-occupied facilities in public or commercial buildings.

EPA received three comments on this aspect of the 2007 Supplemental Proposal. One commenter expressed support for this proposed requirement. The other two provided a number of reasons why the final rule should not include such a requirement. These commenters noted that renovation firms have no contractual connection

with or contractual responsibility to the parents or guardians of children using a child-occupied facility. They believe that the child-occupied facility owner bears primary responsibility for maintaining a safe environment for children. They were also concerned that renovation firms might be called upon to spend a significant amount of additional time at a child-occupied facility to answer parents' questions about lead poisoning. EPA is not persuaded by these comments. Although the firms may have no contractual connection with the parents or guardians of the children, that is often the case with occupants who are not owners. Although child-occupied facility owners bear responsibility for maintaining a safe environment for children, renovation firms are responsible for providing the pamphlet to owners and occupants. Once the renovation firm has distributed the pamphlet, it has no further obligation to educate the owners or occupants about lead poisoning. The pamphlet contains this information and refers to additional resources. EPA acknowledges that it may be difficult to provide copies of the pamphlet to each parent, which is why this final rule allows renovation firms to comply by posting informational signs where parents or guardians would be likely to see them.

c. Other commenter suggestions regarding information distribution to owners and occupants. EPA received a number of comments that recommended that additional information be provided to the owner and the occupant before and after a renovation occurs. These commenters believe that one of the purposes of this rule ought to be to provide enough information to owners and occupants so that they can understand the work practices and can adequately monitor the work being performed by renovation firms. EPA agrees that consumers will play a critical role in ensuring that the requirements of this regulation are being followed. EPA believes that some of the suggested items of additional information, such as an explanation of the cleaning verification process, use of test kits, lead-based paint and dust testing recommendations, and how to find a qualified person to do testing, are best addressed through revisions to the new lead hazard informational pamphlet for renovations, *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools*. Those changes are described and discussed in a notice published elsewhere in today's **Federal Register**.

Other information distribution elements recommended by these commenters are likely to be provided by renovation firms already. For example, several commenters suggested that EPA require the renovation firm to provide emergency contact information to owners and occupants. EPA believes that, during the normal course of business, persons that hire renovation firms to perform renovations typically already have contact information. A person who contracts for a renovation is likely to be the owner of the property being renovated, and this person is also likely to be able to stop the work at any time so that he or she can confer with the certified renovator or supervisor.

Occupants who are not the owners of the property being renovated often will not be the party contracting for the renovation and may not always have emergency contact information for the specific firm performing a renovation in their housing unit or building. However, these occupants will most likely have contact information for their landlord, and the landlord as the person most likely contracting with the renovation firm and therefore to have authority to direct the renovation work. In addition, renovations that occur in occupied rental housing are likely to be maintenance or repair projects that are performed by the landlord, the landlord's employees, or a maintenance company under contract to perform all maintenance for a particular landlord or rental complex.

Some commenters suggested that EPA require renovation firms provide a description of the work area and identify the designated entrance and exit from the work area. EPA is not requiring the renovation firm to designate a specific entrance and exit from the work area. This final rule requires the work area itself to be delineated by warning signs and plastic containment. EPA does not believe there is any utility in requiring the contractor to also provide the owner and occupant with a written description of the work area before the work begins.

Other commenters noted the existence of the Lead Disclosure Rule (Ref. 30), promulgated under section 1018 of the Residential Lead-Based Paint Hazard Reduction Act of 1992, and codified at 40 CFR part 745, subpart F and 24 CFR part 35. These commenters stated that information about the use of spot test kits and the results of those tests, and well as any sort of dust testing information, are information pertaining to lead-based paint or lead-based paint hazards and would therefore have to be disclosed to subsequent purchasers or tenants of the renovated property under the Lead Disclosure Rule. These commenters further opined that a requirement for the renovation firm to provide this information to the owner of the property is necessary to ensure the information is available to be disclosed. With respect to the use of test kits to determine whether components to be affected by a renovation contain lead-based paint, EPA agrees with these commenters in their Lead Disclosure Rule analysis. Therefore, this final rule includes a requirement for the renovation firm to provide, within 30 days, information identifying the manufacturer and model of test kits used, a description of the components tested, including locations, and the results of the test kits to the person who contracted for the renovation. EPA also agrees that dust clearance sampling information is information pertaining to lead-based paint hazards and must be disclosed under the Disclosure Rule. If dust clearance sampling is performed instead of cleaning verification as permitted in 40 CFR 745.85(c), this final rule requires the renovation firm to provide, within 30 days, a copy of the dust clearance report to the person contracting for the renovation.

However, EPA does not believe that information related to cleaning verification is a record or report “pertaining to lead-based paint or lead-based paint hazards” for purposes of section 1018. As discussed in more detail in Unit III.E.7. of this preamble, cleaning verification is not the equivalent of clearance. The purpose of cleaning verification is to determine whether the dust that was created by the renovation, whether or not it contains lead, has been adequately removed. Although the disposable cleaning-cloth study, discussed in Unit III.E.7., and the Dust Study show that information is correlated with the hazard standard, the purpose of cleaning verification is not to detect lead-based paint hazards *per se*. In addition, under this final rule, cleaning verification must be completed for every renovation (i.e., it must achieve “white glove” or the prescribed combination of wet and dry wipes must have been used), so the results of verification will always show that “white glove” or the equivalent has been achieved. As explained below, the cleaning verification is part of a package of work practices that, together, minimize exposure to hazards created by renovation. Also, as explained below, completing the cleaning verification process does not necessarily indicate that the surface does not have lead-based paint hazards unrelated to the renovation. Therefore, EPA will not require the results of cleaning verification activities to be disclosed under the Lead Disclosure Rule.

C. Training and Certification

Under the current Lead-based Paint Activities Regulations at 40 CFR part 745, subpart L, both individuals and firms that perform lead-based paint inspections, lead hazard screens, risk assessments, and abatements must be certified by EPA. EPA proposed a similar, but not identical, regulatory scheme for individuals and firms that perform renovations.

This final rule requires all renovations subject to this rule to be performed by a firm certified to perform renovations. In addition, the rule requires that all persons performing renovation work either be certified renovators or receive on-the-job training from and perform key tasks under the direction of a certified renovator. In order to become a certified renovator, a person must successfully complete an accredited renovator course. EPA renovator certification allows the certified individual to perform renovations in any State, Territory, or Indian Tribal area that does not have a renovation program authorized under 40 CFR part 745, subpart Q. These requirements are discussed in greater detail in the following sections.

EPA is also creating, with this final rule, a dust sampling technician discipline. Although, as discussed in Unit III.E.7. of this preamble, this final rule does not allow dust clearance testing in lieu of post-renovation cleaning verification, EPA still believes that there will be a market for the services of persons with dust sampling technician credentials. EPA recommends that any property owners who choose to

have dust clearance testing performed after a renovation use a certified inspector, risk assessor, or dust sampling technician.

Finally, in response to one commenter who suggested that EPA's use of the term "person" and the term "individual" was confusing, EPA has modified the regulatory text in the sections added or significantly revised by this final rule to use the term "person" when referring to both natural persons and judicial persons, such as renovation firms, property management companies, or units of government, and the term "individual" when referring only to natural persons.

1. *Individuals.* Under this final rule, EPA is establishing new individual certification disciplines for renovators and dust sampling technicians. All renovation activities covered by this final rule must be performed by certified renovators, or by renovation workers who receive on-the-job training in the work practices from a certified renovator.

a. *Certified renovators and renovation workers—i. Responsibilities of certified renovators.* The certified renovator assigned to a renovation is responsible for ensuring that the renovation is performed in compliance with the work practice requirements set out in 40 CFR 745.85. These requirements pertain to warning signs and work area containment, the restriction or prohibition of certain practices (e.g., high heat gun, torch, power sanding), waste handling, cleaning, and post-renovation cleaning verification. The certified renovator can perform these work practices herself or himself. Alternatively, the certified renovator can direct other workers to perform most of these work practices. However, the post-renovation cleaning verification requirements must be performed by a certified renovator. These requirements cannot be delegated to a worker. If the certified renovator directs the other workers to perform the work practices, the certified renovator must be at the work site during the critical phases of the renovation activity. The critical phases are posting warning signs, containing the work area, and cleaning the work site.

Although the certified renovator is not required to be on-site at all times, while the renovation project is ongoing, a certified renovator must nonetheless regularly direct the work being performed by other workers to ensure that the work practices are being followed. When a certified renovator is not physically present at the work site, the workers must be able to contact the renovator immediately by telephone or other mechanism. A certified renovator must:

- Perform the post-renovation cleaning verification described in 40 CFR 745.85(b).
- Perform or direct workers who perform all of the work practices described in 40 CFR 745.85(a).

- Provide training to workers on the work practices they will be using in performing their assigned tasks.
- Be physically present at the work site when the signs required by 40 CFR 745.85(a)(1) are posted, while the work area containment required by 40 CFR 745.85(a)(2) is being established, and while the work area cleaning required by 40 CFR 745.85(a)(5) is performed.
- Regularly direct the work being performed by other workers to ensure that the work practices are being followed, including maintaining the integrity of the containment barriers and ensuring that dust or debris does not spread beyond the work area.
- Be available, either on-site or by telephone, at all times that renovations are being conducted.
- When requested by the party contracting for renovation services, use an acceptable test kit to determine whether components to be affected by the renovation contain lead-based paint.
- Have with them at the work site copies of their initial course completion certificate and their most recent refresher course completion certificate.
- Prepare the records required to demonstrate that renovations have been performed in accordance with the requirements of this rule.

There are some slight revisions between the 2006 Proposal and this final rule, although none of these changes add to or detract from the renovator's responsibilities. First, the Proposal used both the term "lead-safe work practices" and "work practices" in the preamble and in the proposed rule text. Although the work practices required in this final rule are lead-safe, for purposes of clarity, the final rule text has been changed to "work practices." The reason for this change was to make text of the rule relating the renovator's responsibilities text consistent with other provisions in the rule, particularly 40 CFR 745.85 (Work Practice Standards). Today's work practices are lead-safe work practices. The work practice standards listed in § 745.85(a) are the same tasks that the other workers will be directed in and trained to do by the certified renovator (except for cleaning verification). In addition, the term "lead-safe work practices" has different meanings in different contexts, and this change is to make clear that the work practices required by this final rule are the work practices required in § 745.85(a).

Second, one of the renovator's responsibilities listed in the preamble of the 2006 Proposal was to "[r]egularly direct the work being performed by uncertified persons to ensure that lead-safe work practices are being followed, the integrity of the containment barriers is maintained, and dust or debris is not spread beyond the work area." The word "regularly" was inadvertently omitted from the proposed regulatory text. To make the regulatory text consistent with the

preamble, the word “regularly” has been added to the final regulatory text. In addition, EPA has slightly modified the regulatory text, consistent with the preceding paragraph, to clarify that maintaining the integrity of the containment barriers and ensuring that dust or debris does not spread beyond the work area are among the work practices required by the rule.

Some commenters agreed that it was unnecessary for a certified renovator to be on site at all times and believed that oversight by a certified renovator on a regular basis was sufficient. One commenter believed that the certified renovator should be on site at critical points including site preparations and isolation, end of day and end of project cleaning, and cleaning verification. Many other commenters thought a certified renovator should be on site at all times. Another stated that a certified renovator would not have to be on site at all times if workers received lead safe work practices training. After carefully considering the issue, EPA has concluded that requiring a certified renovator to be on site during critical phases of the work is sufficient to ensure that the work practices required by this final rule are followed. These work practices provide a mechanism to contain dust and debris generated by a job and a clean-up regimen following work that is designed to minimize exposure to lead-based paint hazards created during the renovation activity. Once the containment has been established and until cleanup begins, this final rule requires few, and simple, changes from the way renovation work is currently carried out. Specifically, renovation workers need to avoid using the specific practices prohibited by this final rule; they need to maintain the containment (e.g., avoid ripping or displacing the plastic); and they need to make sure that any waste generated is contained at the end of the day. These are important but relatively simple measures that EPA does not believe require formal classroom training, or the constant supervision of a certified renovator who has had formal training. Once the cleanup begins, the certified renovator will again be required to be present, either performing the cleanup or directing others. In addition, the certified renovator must perform the cleaning verification. Thus, EPA has concluded that having a renovator on site at all times is unwarranted.

ii. *Renovator training.* To become a certified renovator, a person must successfully complete a renovator course accredited by EPA or by a State, Territorial, or Tribal program authorized by EPA.

Some commenters questioned the need to create a separate discipline for renovators. In their opinion, the existing abatement course is sufficient (with some basic changes) and to create a new program will take resources away from existing efforts in lead hazard control. EPA believes that there are sufficient differences between abatement and renovation activities to warrant different training and work practice requirements. Specific activities of an abatement contractor may be similar to those of a renovator (e.g., sanding, caulking, painting, sawing), but because the project goal is the permanent elimination of

hazards, the application and methodology differ. Therefore, a significant portion of an abatement contractor's training is focused on abatement techniques and selection of the appropriate course of action for a variety of hazards. Renovators, on the other hand, do not seek to permanently eliminate lead hazards. Renovators perform maintenance and improvement tasks as directed by the consumer. The goal of EPA's renovator training and certification program is not to update the methodology a renovator uses to accomplish these tasks, with the exception of the practices prohibited or restricted by this final rule, but rather to introduce containment and cleaning methods to minimize exposure to lead-based paint hazards created by the renovation activity.

Several commenters saw the need for universal, standard renovator training. A commenter suggested that training for certified renovators be similar to the current EPA/HUD renovator and remodeler course. One commenter thought that standard training would make it easier when hiring someone to verify that they had completed the appropriate training. Another mentioned that it would encourage state-to-state reciprocity for training programs so that renovators would not need to take multiple courses with the same content. EPA plans to work with HUD to update the model EPA/HUD renovator training course to cover the requirements of this final rule. EPA agrees that reciprocity among authorized State, Territorial, and Tribal programs, and with the Federal program, is preferable. However, as with the abatement program, authorized programs will have the ability to customize requirements and course content based on their particular needs. The Agency encourages jurisdictions seeking authorization to consider reciprocity of training as they develop their individual programs.

Commenters were also concerned about the cost of formal training. Commenters thought that EPA could provide free training to encourage renovator compliance, or that EPA funds for enforcement of the final rule would be better spent on training. EPA agrees that renovator training should be as inexpensive as possible. However, the training course costs will be established by independent training programs based on market forces. The total cost of conducting a training course depends upon the labor cost for the instructor(s), the cost of providing a classroom and other facilities, and other fixed costs. But the cost per trainee also depends on the number of trainees per class. Due to the large number of individuals who will need training, the Agency anticipates that demand will be high, keeping the cost per trainee lower than might otherwise be the case. But also due to that large volume, the Agency does not anticipate that it will be able to provide any significant source of funding to support training.

iii. *Other renovation worker training.* This final rule does not require everyone involved in performing a regulated renovation project to receive training from an accredited training provider. To allow flexibility for firms undertaking these projects, the rule allows firms to

use other workers to perform renovation activities as long as they receive on-the-job training (OJT) in work practices from a certified renovator. This training must include instruction in the specific work practices that these workers will be responsible for performing. OJT training occurs while the worker is engaged in productive work and which provides knowledge and skills essential to the full and adequate performance of the job. OJT may also be structured through a planned process of developing competence on units of work by having the certified renovator train the worker at the work setting or a location that closely resembles the work setting. Although there is no specific requirement for “refresher training,” OJT must be provided for each worker for each job to the extent necessary to ensure that that worker is adequately trained for the tasks he or she will be performing.

If, under the direction of the certified renovator, the workers will be posting warning signs, establishing containment, or cleaning the work area after the renovation, the certified renovator must provide instruction, either verbally or through demonstration, to the workers in how to perform these tasks. With respect to other activities, including work performed while the certified renovator is not present, the certified renovator must provide instruction, either verbally or through demonstration, in how to perform the work without using work practices prohibited by this rule, how to maintain the integrity of the containment barriers (e.g., taking care not to tear the plastic), and how to avoid spreading dust or debris beyond the work area (e.g., vacuuming clothing and tools with a HEPA vacuum before leaving the work area). In any event, the certified renovator remains responsible for ensuring that this work is done in compliance with the rule’s requirements, e.g., that containment sufficient to prevent release of dust or debris from the work site has been established and that clothing and tools were adequately cleaned before leaving the work area.

Workers need not be trained in work practices that do not pertain to the renovations they will be performing. If the certified renovator will be the one posting warning signs, establishing containment, and cleaning the work area after the renovation, it is not necessary for the certified renovator to provide instruction on these tasks to any workers who will be used elsewhere on the project. Similarly, workers hired to perform only exterior projects need not receive training in how to clean an interior work area after a renovation.

EPA chose to allow OJT to alleviate industry concerns raised during the SBREFA panel process regarding high employee turnover rates within the industry and the potential for high training costs if all workers were required to be certified. The Agency concluded that allowing OJT could be done effectively and would provide flexibility for firms undertaking renovation projects. EPA determined that OJT can be effectively delivered by a certified renovator because the requirements themselves are simple and easy to understand. This final

rule also requires a certified renovator be assigned and responsible for each project to ensure compliance with required standards.

Some commenters agreed that OJT by a certified renovator is sufficient for training workers. One commenter stated that as long as a specific person is designated to oversee the job, there is no need for all workers on site to have formal training. The commenter noted the similarity between this approach and OSHA's "competent person" standard. EPA agrees that there are some similarities between the approach in this final rule and OSHA's "competent person" standard.

However, the majority of commenters had concerns about the use of OJT to train workers. Many argued that OJT is insufficient for providing workers with the necessary skills and thought renovation workers should receive formal LSWP training such as a one-day course equivalent to that required for certified renovators. Some of these commenters also thought that workers should be certified or licensed.

Some commenters were concerned that the content of OJT is not clearly defined in the rule. One believed EPA should impose a structured OJT program in order to produce consistent, accurate, and comprehensive training outcomes. Others thought more time was needed for OJT, with suggestions ranging from 5 to 6 hours of training to 3 to 4 days. EPA has neither established a structured OJT program nor required a specific length of time for OJT because the OJT required will vary widely from project to project, depending upon how the other workers are used. As discussed above, if the worker will not be establishing containment, there is no need to train the worker in how to establish containment. If the worker in question is an electrician, and he will merely be installing an electrical outlet as part of a larger job, then there may be no need to provide any training to this worker other than instructing him not to disturb the plastic on the floor and making sure that he and his tools are free of dust and debris before leaving the work area.

In addition, as discussed in Unit III.C.1.c.iii. of this preamble, EPA will "grandfather" persons with previous EPA/HUD lead-safe work practices training or accredited abatement supervisor or worker training. To become certified renovators, these persons must take a renovator refresher course in order to ensure that they are acquainted with how to use test kits to determine whether lead-based paint is present on a component and how to perform cleaning verification. However, even if they do not take the refresher course and become certified renovators, these individuals have still received significant training in the required work practices such as establishing containment and cleaning the area after the job is finished. They are not likely to need much, if any OJT, depending upon how recent their training was. Similarly, although not recognized for the purpose of "grandfathering" by EPA, HUD's Lead Maintenance course would also provide a great deal of information on lead-safe work practices. Someone who had

taken the Maintenance course recently would also not be likely to need much, if any, OJT.

Several commenters thought that workers would not receive adequate OJT because the certified renovator was not qualified to train others. They noted that the certified renovators are renovators, not professional trainers, and do not necessarily have the skills necessary for teaching others.

After consideration of these commenters' concerns, EPA has concluded that OJT is sufficient for training some renovation employees. The work practice standards of this final rule are not complex or difficult to institute, and those activities critical to ensuring the lead safe outcome of the project are either conducted by certified renovators or directed by certified renovators. The remainder of the project is often just the renovation itself, and EPA was careful when developing these final work practices to minimize the effect on the way typical renovations are conducted. With the exception of the prohibition of certain unsafe practices, renovation methods are unaffected by this rule. For example, the work practices of this final rule do not affect the method a firm would employ to replace a window. A certified renovator should be able to demonstrate to other firm employees work practices, such as how to work within containment and how to move into and out of containment without spreading lead dust and debris. EPA does not believe a professional trainer is needed to train renovation workers, who will be directed by a certified renovator if they will be performing any of the key tasks associated with the work practices. Most of the people performing renovations today are not trained by professional trainers. They are trained on-the-job by experienced firm employees. For example, persons learn the various techniques for removing and replacing windows from others in the firm who are experienced in these techniques. Renovation workers can learn work practices in the same way from a certified renovator.

Although the work practices in the final regulation are sufficiently straightforward and can be easily demonstrated by the certified renovator, EPA agrees that renovators do not necessarily consider themselves to be trainers. Therefore, accredited renovator training will include a train-the-trainer component to provide instruction on providing OJT. In addition, instructors will be expected to provide training tips to renovators during hands-on instruction. As the instructor is showing the renovator how to do these work practices, he or she can also provide instruction on how to show others how to do these work practices. Accordingly, EPA has concluded that certified renovators will be adequately prepared to provide OJT that is sufficient and appropriate for the purposes of this rule.

Commenters expressed concerns that the rule would not provide appropriate training for the large number of non-English speaking workers in the renovation field. One of these commenters suggested that

EPA consider such means as graphic manuals, video presentations, and translators to aid in training non-English speaking workers. Another thought that a hands-on only training process overlooked possible language barriers between the certified renovator and trainee. EPA agrees that OJT can be conducted effectively by demonstration by the certified renovator or through the use of graphic training materials. The Agency plans to develop materials to assist certified renovators in conducting on-the-job training. To the extent possible, these materials will use a graphic format that does not require the use of any particular language. Moreover, renovation firms currently communicate job needs to their employees, and EPA doubts that firms routinely hire people with whom they are unable to communicate. Finally, EPA emphasizes again that the certified renovator and the renovation firm are responsible for ensuring compliance with this final rule. If the certified renovator has doubts about an employee's understanding of or ability to comply with the requirements that are relevant to the work he or she is to undertake, the certified renovator may need to be on site and direct the work more regularly than he otherwise would, or may need to perform certain tasks himself. However, given the relative simplicity of the work practices that are required between establishment of containment and cleanup, EPA does not expect that this will often be necessary.

Some commenters were concerned that OJT does not include a means to assess worker competence such as an examination. Commenters were also concerned about ongoing training needs and suggested requiring worker refresher training on a periodic or annual basis. This final rule requires a certified renovator to direct workers with OJT as necessary to ensure that work practices are being followed. This will necessarily involve a period of observation after OJT is provided to ensure that the worker has understood and is following the work practices pertinent to his assigned duties. In addition, to some extent, OJT is continuous and certified renovators will likely need to continue to provide training to workers based on the activities that they will be expected to perform on a particular job. A certified renovator would not need to provide OJT to the same worker on consecutive jobs if the worker is performing the same work, but if the nature of the work varies, or if the firm hires a new employee, relevant OJT would have to be provided for the work to be performed. EPA believes that the continuous nature of OJT obviates the need for a refresher training requirement in the rule and will serve as an incentive for firms to have their permanent employees trained as certified renovators. EPA also believes that refresher training *per se* is not practical, given that OJT will be specific to the job in question.

Some commenters wanted some form of verification that a worker had received training, such as a certificate of training or a sticker which could be placed on an ID card. Because each worker is not likely to receive training in all aspects of lead safe work practices, a certificate

or other form of training completion that would indicate an employee's OJT is complete is not appropriate for this program. It is important to note that OJT is not as portable as certified renovator training nor is it intended to be. Certified renovators carry a training certificate that they can present to each new employer to prove that they have received training in the required work practices. There is no corresponding document that can be used to verify OJT by a previous employer. Renovation firms will generally need to provide OJT each time a new worker is used. It is also the renovation firm's responsibility to adequately document the elements of OJT provided to each worker on each project.

Because a certified renovator must be assigned to each and every renovation covered by this regulation, EPA anticipates that some renovation contractors and property management companies will find that they achieve maximum efficiency and flexibility by qualifying all of their permanent employees who perform renovations as certified renovators. However, due to the industry's high employee turnover rates and short-term labor needs, the Agency believes that training flexibility in the form of on-the-job training is needed. EPA believes that such flexibility will provide firms the ability to respond to variable labor demands and will not compromise the safety of this final rule. EPA is concerned that a regulation requiring formal, classroom training for every worker performing any renovation activity would be unrealistic for this industry and therefore less effective at ensuring that the renovation work force is trained in work practices than the more balanced training requirements in this final rule.

b. *Dust sampling technicians.* Except as provided in 40 CFR 745.85(c), this final rule does not allow dust clearance sampling to be performed in lieu of post-renovation cleaning verification. However, some property owners may still choose to have dust clearance sampling performed after the renovation. Dust sampling technicians certified in accordance with this final rule will be available to perform dust clearance sampling after renovations and for purposes of HUD's Lead Safe Housing Rule.

Some commenters questioned the need for dust sampling technicians. One stated that there is no benefit to creating a third inspection-type discipline that has such limited training requirements. Two commenters thought that only EPA- or State-certified risk assessors should be allowed to collect dust wipe clearance samples and two commenters thought that dust sampling technicians should be required to work under a certified risk assessor or inspector.

In 1999, in order to make accurate dust testing for lead more available and affordable, Congress provided EPA with funding for the development of a 1-day dust sampling technician course. Congress also encouraged the Agency to promote the recognition of this discipline. EPA completed the development of the course, entitled "Lead Sampling

Technician Training Course,” in July of 2000. This course provides instruction on how to conduct a visual assessment for deteriorated paint, collect samples for lead dust, and interpret sample results. The training curriculum provides clearance sampling instruction that is equivalent to that presented in inspector and risk assessor courses, in terms of time and quality with respect to dust sampling. Therefore, EPA can recommend that property owners and others who wish to have optional dust sampling performed use the services of a certified inspector, risk assessor, or dust sampling technician.

c. *Certification of individuals.*—i. *Initial certification.* Section 745.90 of this final rule addresses renovator and dust sampling technician certification. To become a certified renovator, a person must successfully complete a renovator course accredited by EPA or by a State, Territorial, or Tribal program authorized by EPA under 40 CFR part 745, subpart Q. The renovator course accreditation requirements are based on the joint EPA-HUD model curriculum entitled Lead Safety for Remodeling, Repair, & Painting. EPA is not requiring additional education or work experience of persons wishing to become certified renovators. EPA renovator certification will allow the certified individual to perform renovations covered by this section in any State or Indian Tribal area that does not have a renovation program authorized under 40 CFR part 745, subpart Q. To become a certified dust sampling technician, a person must successfully complete a dust sampling technician training course that has been accredited either by EPA or by a State, Territorial, or Tribal program authorized by EPA under 40 CFR part 745, subpart Q. EPA is not requiring additional education or work experience of persons wishing to become certified dust sampling technicians.

The final rule also establishes, in 40 CFR 745.91, procedures for suspending, revoking, or modifying an individual’s or firm’s certification. These procedures are very similar to the current procedures in place at 40 CFR 745.226(i) for suspending, revoking, or modifying the certification of an individual who is certified to perform lead-based paint activities. In addition, under the final rule, renovator certification can be suspended, revoked, or modified if the certified renovator does not conduct projects to which he or she is assigned in accordance with the work practice requirements of this final rule. Finally, in order to ensure that the effect of a suspension, revocation, or modification determination is clear to the certified individual or firm, EPA has added language to this section ensuring that the commencement date and duration of a suspension, revocation, or modification is identified in the Presiding Officer’s decision and order. EPA has also added language to this section to clarify what steps an individual or firm must take after such an action in order to exercise the privileges of certification again. An individual whose certification has been suspended must take a refresher training course in the appropriate discipline in order to make his or her certification current,

while an individual whose certification has been revoked must take another initial training course in order to be re-certified. A firm whose certification has been suspended need not do anything after the suspension ends to become current again, as long as the suspension ends before the firm's certification expires. If the firm's certificate expires during the suspension, the firm must apply for re-certification after the suspension ends. If a firm's certification is revoked, the firm must apply for certification after the revocation period ends in order to be certified.

Some commenters questioned the need for a certification requirement, emphasizing that it is the training that is important rather than the certification. One commenter thought that, since firms will have to be certified, there was no added value in certifying renovators. Others supported certification and some thought renovators should have to apply to EPA to receive their certification in the same way that abatement workers do, stating that no regulatory program can work unless the regulating agency can reliably identify and contact the regulated individuals. One commenter thought that there should also be a work experience requirement for certified renovators.

EPA believes that renovators must be certified so that the Agency has a mechanism to verify an individual has received the appropriate training. In addition, if a contractor does not comply with the regulatory standards then withdrawal of the renovator's certification is a regulatory remedy available to the Agency. The final rule includes a certification process that is more streamlined than the individual certification process of the Agency's abatement regulations. In the abatement program, an individual must complete training, then submit an application and fee to the Agency and, depending on the discipline, take a third party exam in order to be certified. In contrast, an individual will be considered a certified renovator upon successful completion of an accredited training program, and the accredited training program is required to submit identifying and contact information to EPA regarding the individuals that they have trained. EPA does not believe that work experience requirements are necessary because previous experience in the construction or renovation industry would do little to help an individual understand or perform the work practices, which are not a standard practice in the industry. Consequently, there is no relevant work experience for EPA to require. In addition, the work practices required by this final rule are sufficiently straightforward that EPA does not believe it is necessary to require work experience in addition to certified renovator training.

Because EPA is not requiring any additional education or work experience requirements, or a third-party examination similar to that taken by inspector, risk assessor, or supervisor candidates, EPA believes that there is little value in requiring candidates to apply to EPA to receive their renovator or dust sampling technician certification. Currently, the only certified discipline without prerequisites in

education or experience, or a third-party examination, is the abatement worker. When candidates for worker certification apply to EPA, EPA verifies that the copy of the training course certificate submitted with the application is from an accredited training provider. Without requiring renovators or dust sampling technicians to apply to EPA for certification EPA will still receive course completion information from course providers. With this information, EPA will have a complete list of certified renovators and will be able to check to see if a particular course completion certificate holder appeared on a course completion list submitted by the training course provider identified on the certificate. When EPA inspects a renovation job for compliance with these regulations, EPA will have the ability to verify, to the same extent, the validity of a course completion certificate held by a renovator at that job. Therefore, under this final rule, EPA is requiring that a course completion certificate from an accredited training provider serve as a renovator's or dust sampling technician's certification. To facilitate compliance monitoring, the rule requires a certified renovator or dust sampling technician to have a copy of the course completion certificate at the job site.

Several commenters saw the need for a way to determine that a certified renovator was current with applicable training requirements. Suggestions for proof of training included issuing photo IDs, issuing a hard card or certificate, and establishing a national database of workers with current training. One commenter thought that it should be the responsibility of the training provider to certify that renovators have successfully completed the training requirements and to then supply EPA with all of the information. EPA agrees that there must be a way to determine if a renovator is certified and is current with training requirements. The Agency agrees that a database of renovator information would be important, and will include identifying and training information in the Agency's Federal Lead Paint Program (FLPP) database. However, this database will only contain information about certified renovators working in federally administered jurisdictions. In addition, the Agency will require training programs to include a photograph of the individual who completes renovator or dust sampling technician training on the training certificate and to submit that photo to the Agency to be included in the database record. This will enable inspectors to determine whether a particular individual has received training from an accredited training provider.

Some of the commenters had concerns specific to small businesses. Two commenters stressed the need for outreach programs to inform small businesses of new compliance requirements. One commenter stated that smaller firms should not be exempt from training and certification requirements; another thought that small businesses would continue to operate without appropriate training and certification unless there was some type of enforcement. EPA understands that the task of communicating this final rule requirements to the renovation

community will be challenging. Therefore, EPA is developing a comprehensive outreach and communications program to support this final rule. This will include outreach to contractors as well as consumers. In addition the Agency plans to roll out a compliance assistance effort to complement this undertaking.

One commenter suggested that authorized State, Territorial, or Tribal programs include the requirement for training as part of a contractor licensing function, thereby eliminating the need to create a special (new) lead renovator's certification or license. EPA agrees that where a State, Territory, or Tribe has a pre-existing relationship with renovation contractors, such as a renovators' licensing program, the simplest and most cost-effective approach may be to incorporate a requirement for lead safe work practice training into that pre-existing program.

ii. *Recertification.* Under this final rule EPA is requiring that renovators and dust sampling technicians who wish to remain certified take refresher training every 5 years. In addition, EPA is requiring that the refresher training course be half the length of the initial course. This is consistent with current practice for certified individuals performing lead-based paint activities. If an individual does not take a refresher course within 5 years of the date he or she completed the initial course or the previous refresher course, that individual's certification will expire on that date and that individual may no longer serve as a certified renovator or dust sampling technician. There is no grace period. To become certified again, the individual must take another initial training course. In addition, under this final rule a certified renovator may choose to take the initial renovator course instead of a refresher course to allow maximum flexibility, particularly if for some reason the person was unable to attend a refresher course.

Some commenters asserted that the refresher requirement was of no benefit or imposed an unnecessary cost. These commenters reasoned that lead-safe work practices were not likely to change significantly over time. One noted that HUD's experience with lead-safe work practices training since 1999 has not revealed a need for refresher training in their program. Commenters who supported refresher training differed on the frequency of the training and the length of the refresher course. Some agreed that refresher training should be required every 3 years, others thought it should be required biennially, annually, or every 3 to 6 months. One commenter agreed with the proposed 4-hour course, two commenters thought a 4-hour course was too short, and one thought that instead of completing a refresher, certified renovators should be required to retake the initial training course every 2 to 3 years. One commenter stated that a certified renovator should have the opportunity to take a third party test and allow the renovator to "test out" of having to complete the refresher course.

After considering the range of concerns raised by the commenters, EPA has concluded that refresher training is important for renovators and dust sampling technicians and for the Agency. During the refresher course, renovators and dust sampling technicians are given the opportunity to discuss any point of emphasis and to be updated on changes in the regulations or technical issues. For example, refresher training could be used to update renovators on availability of new techniques and products, such as test kits. Refresher training provides the Agency with a mechanism to pass along critical information to certified individuals and to keep track of the workforce. However, EPA has determined that these purposes can be adequately served by 4-hour refresher training every 5 years, instead of every 3 years. This provides a reasonable period between trainings that limits training costs while providing an opportunity to update renovators and dust sampling technicians regarding regulations and technical issues. EPA believes that most renovators will not also be certified abatement professionals, so the difference in the length of time between required refresher courses should not confuse individuals about their responsibilities under the two programs.

iii. *Grandfathering*. Under this final rule, individuals who successfully completed an accredited abatement worker or supervisor course, and individuals who successfully completed either HUD, EPA, or the joint EPA/HUD model renovation training courses may take an accredited refresher renovation training course in lieu of the initial renovation training to become a certified renovator. In addition, individuals who have successfully completed an accredited lead-based paint inspector or risk assessor course, but are not currently certified in the discipline, may take an accredited refresher dust sampling technician course in lieu of the initial training to become a certified dust sampling technician. Inspectors and risk assessors who are certified by EPA or an authorized program are qualified to perform dust sampling as part of lead hazard screens, risk assessments, or abatements. Therefore, it would be unnecessary for a certified inspector or risk assessor to seek certification as a dust sampling technician.

A number of commenters thought that certification should be given to those who have already attended appropriate training. Some of these commenters thought that individuals who had received EPA, HUD, or State-approved Lead Safe Work Practices (LSWP) training should be grandfathered. One commenter thought individuals that had completed OSHA's 40-hour Hazardous Waste Operations and Emergency Response course should also be grandfathered and another wanted individuals that had taken the National Apartment Association's lead worker training course to be grandfathered. Four commenters were in favor of grandfathering dust sampling technicians that have previously completed a dust sampling course.

Most of the commenters who expressed an opinion agreed with grandfathering previously trained individuals but suggested that there

be restrictions. Some of these commenters thought that in order to receive credit the training needed to have been completed in the last 2 to 3 years while others thought that certification should be given only if a refresher or “gap” course were completed. One commenter thought that the quality of the previous course should be taken into account and another commenter thought that a one-size fits all rule would not be appropriate and that factors including previous course requirements, the facility that had provided the training, and time elapsed since initial training should all be considered in establishing requirements for streamlined certification. One commenter opposed grandfathering, noting that existing courses do not cover lead test kits, cleaning verification, or recordkeeping in accordance with the proposed rule.

The final rule allows individuals who have successfully completed model renovation courses developed by HUD or EPA and individuals who have taken an abatement worker or supervisor course accredited by EPA or an authorized State or Tribal program to become certified renovators by taking EPA-accredited renovator refresher training. Individuals who have successfully completed a risk assessor or inspector course accredited by EPA or an authorized State or Tribal program can become certified dust sampling technicians by taking EPA-accredited dust sampling technician refresher training. EPA is recognizing only EPA and HUD model renovation training and lead-based paint activities training courses accredited by EPA or an authorized State, Territorial, or Tribal program because EPA has not sufficiently evaluated the content of other courses. In addition, it would be unwieldy to develop the content of multiple refresher courses based on the content of different initial training courses. While the recognized training provides meaningful information relevant to these disciplines, it does not include some specific requirements of this final regulation. Therefore, EPA is requiring these individuals to receive refresher training to ensure they are familiar with the requirements of this final rule. Training providers are required to notify EPA of the individuals who become certified by successfully completing the refresher training. This information will support EPA’s compliance assistance programs.

2. *Renovation firms*—a. *Responsibilities of renovation firms*. Under this final rule, firms must ensure that all persons performing renovation activities on behalf of the firm are either certified renovators or have been trained and are directed by a certified renovator in accordance with 40 CFR 745.90. The firm is responsible for assigning a certified renovator to each renovation performed by the firm and ensuring that the certified renovator discharges all of the responsibilities identified in this final rule. The firm must ensure that the information distribution requirements in 40 CFR 745.84 are met. As mentioned above, the certified renovator is responsible for ensuring compliance with 40 CFR 745.85 at all renovations to which he or she is assigned. The firm is also responsible for ensuring that all renovations performed by the firm

are performed using certified renovators and in accordance with the work practice standards in proposed 40 CFR 745.85.

Where multiple contractors are involved in a renovation, any contractor who disturbs, or whose employees disturb, paint in excess of the minor maintenance exception is responsible for compliance with all of the requirements of this final rule. In this situation, renovation firms may find it advantageous to decide among themselves which firm will provide pre-renovation education to the owners and occupants, which firm will establish containment, and which firm will perform the post-renovation cleaning and cleaning verification. For example, a general contractor may be hired to conduct a multi-faceted project involving the large-scale disturbance of paint, which the general contractor then divides up among several subcontractors. In this situation, having the general contractor discharge the obligations of the Pre-Renovation Education Rule is likely to be the most efficient approach, since this only needs to be done once. With regard to containment, the general contractor may decide that it is most cost-effective to establish one large work area for the entire project. In this case, from the time that containment is established until post-renovation cleaning verification occurs, all general contractor and subcontractor personnel performing renovation tasks within the work area must be certified renovators or trained and directed by certified renovators in accordance with this rule. In addition, these personnel are responsible for ensuring the integrity of the containment barriers. The cleaning and post-renovation cleaning verification could be performed by any properly qualified individuals, without regard to whether they are employees of the general contractor or a subcontractor. However, all contractors involved in the disturbance of lead-based paint, or who perform work within the work area established for the containment of lead dust and debris, are responsible for compliance with this final rule, regardless of any agreements the contractors may have made among themselves.

b. *Certification of firms*—i. *Initial certification*. This final rule requires firms that perform renovations, as defined by this rule, to be certified by EPA. EPA is adding a definition of “firm” to § 745.83 to make it clear that this term includes persons in business for themselves, i.e., sole proprietorships, as well as Federal, State, Tribal, and local governmental agencies, and nonprofit organizations. Firms covered by this final rule include firms that typically perform renovations, such as building contractors or home improvement contractors, as well as property management companies or owners of multi-family housing performing property maintenance activities that include renovations within the scope of this final rule.

This final rule provides information about the certification and re-certification process, establishes procedures for amending and transferring certifications, and identifies clear deadlines. A firm wishing to become certified to perform renovations must submit a complete

“Application for Firms,” signed by an authorized agent of the firm, along with the correct certification fee. EPA intends to establish firm certification fees in a separate rulemaking. EPA will approve a firm’s initial application within 90 days of receipt if it is complete, including the proper amount of fees, and if EPA determines that the environmental compliance history of the firm, its principals, or its key employees does not show an unwillingness or inability to comply with applicable environmental statutes or regulations. EPA will generally consider the following to be an indication that the applicant is unwilling or unable to comply with environmental statutes or regulations if, during the past 3 years, the applicant has:

- A criminal conviction under a Federal environmental statute;
- An administrative or civil judgment against the applicant for a willful violation of a Federal environmental statutory or regulatory requirement; or
- More than one administrative or civil judgment for a violation of a Federal environmental statute. Violations that involve only recordkeeping requirements will not be considered.

If the application is approved, EPA will establish the firm’s certification expiration date at 5 years from the date of EPA’s approval. EPA certification will allow the firm to perform renovations covered by this section in any State or Indian Tribal area that does not have a renovation program authorized under 40 CFR part 745, subpart Q. If the application is incomplete, EPA will notify the firm within 90 days of receipt that its application was incomplete, and ask the firm to supplement its application within 30 days. If the firm does not supplement its application within that period of time, or if EPA’s check into the compliance history of the firm revealed an unwillingness or inability to comply with environmental statutes or regulations, EPA will not approve the application and will provide the applicant with the reasons for not approving the application. EPA will not refund the application fees. A firm could reapply for certification at any time by filing a new, complete application that included the correct amount of fees.

This final rule provides firms with more time to amend their certification whenever a change occurs. A firm must amend its certification within 90 days whenever a change occurs to information included in the firm’s most recent application. If the firm failed to amend its certification within 90 days of the date the change occurred, the firm would not be authorized to perform renovations until its certification was amended. Examples of amendments include a change in the firm’s name without transfer of ownership, or a change of address or other contact information. To amend its certification, a firm must submit an application, noting on the form that it was submitted as an amendment. The firm must complete the sections of the application

pertaining to the new information, and sign and date the form. The amendment must include the correct amount of fees. Amending a certification will not affect the validity of the existing certification or extend the certification expiration date. EPA will issue the firm a new certificate if necessary to reflect information included in the amendment. Firm certifications are not transferable--if the firm is sold, the new owner must submit a new initial application for certification in accordance with 40 CFR 745.89(a). The final rule also includes procedures for suspending, revoking, or modifying a firm's certification. These procedures are very similar to the current procedures in place for suspending, revoking, or modifying the certification of a firm that is certified to perform lead-based paint activities.

Some commenters questioned the need for firm certification, while others, including industry representatives, supported it. The Agency believes that firm certification is necessary for several reasons. First, certification is an important tool for the Agency's enforcement program. To become certified, a firm acknowledges their responsibility to use appropriately trained and certified employees and follow the work practice standards set forth in the final rule. This is especially important under this final rule, since the certified renovator is not required to perform or be present during all of the renovation activities. Under these circumstances, it is important for the firm to acknowledge its legal responsibility for compliance with all of the final rule requirements, since the firm both hires and exercises supervisory control over all of its employees. Should the firm be found to violate any requirements, its certification can be revoked, giving the firm a strong incentive to ensure compliance by all employees.

ii. *Recertification.* Under 40 CFR 745.89(b), a certified firm maintains its certification by submitting a complete and timely "Application for Firms," noting that it is an application for re-certification, and paying the required re-certification fee. With regard to the timeliness of the application for re-certification, if a complete application, including the proper fee, is postmarked 90 days or more before the date the firm's current certification expires, the application will be considered timely and sufficient, and the firm's existing certification will remain in effect until its expiration date or until EPA has made a final decision to approve the re-certification application, or not, whichever occurs later. If the firm submits a complete re-certification application fewer than 90 days before the date the firm's current certification expired, EPA might be able to process the application and re-certify the applicant before the expiration date, but this would not be guaranteed. If EPA does not approve the re-certification application before the existing application expired, the firm's certification expires and the firm is not able to conduct renovations until EPA approves its re-certification application. In any case, the firm's new certification expiration date will be 5 years from the date the existing certification expired.

If the firm submits an incomplete application for re-certification and EPA does not receive all of the required information and fees before the date the firm's current certification expires, or if the firm does not submit its application until after its certification expired, EPA will not approve the firm's re-certification application. The firm cannot cure any deficiencies in its application package by postmarking missing information or fees by its certification expiration date. All required information and fees must be in EPA's possession as of the expiration date for EPA to approve the application. If EPA does not approve the application, the Agency will provide the applicant with the reasons for not approving the re-certification application. Any fees submitted by the applicant will not be refunded, but the firm can submit a new application for certification, along with the correct amount of fees, at any time.

As with initial applications, this final rule includes a description of the actions EPA may take in response to an application for re-certification and the reasons why EPA will take a particular action. This section is identical to the process for initial applications, except that EPA will not require an incomplete application to be supplemented within 30 days of the date EPA requests additional information or fees. In the re-certification context, the firm must make its application complete by the date that its current certification expires.

Several commenters thought that firms should not be required to be re-certified because the firm's certification is not based on knowledge or technology, but rather on a promise to abide by the rules. The Agency believes that firm re-certification is an important element of the final regulation. Firm re-certification provides a mechanism for EPA to keep its records current with respect to firms actively engaged in renovations. Re-certification also provides a means for EPA to ensure that it has updated firm contact information. Re-certification also prompts the firm to positively reaffirm their commitment to adhere to the requirements set forth in this regulation. Finally, re-certification allows EPA an opportunity to review a firm's compliance history before it obtains re-certification. However, EPA has determined that these purposes can be adequately served by re-certifying renovation firms every 5 years instead of every 3 years as proposed.

D. Training Provider Accreditation and Recordkeeping

EPA is amending the general accreditation requirements of 40 CFR 745.225 to apply to training programs that offer renovator or dust sampling technician courses for certification purposes. The regulations describe training program qualifications, quality control measures, recordkeeping and reporting requirements, as well as suspension, revocation, and modification procedures. Amendments to § 745.225 add specific requirements for the renovator and dust sampling technician disciplines. Also included are minimum training curriculum, training hour, and hands-on requirements for courses leading to certification as

a renovator or a dust sampling technician. As discussed in the previous Unit of this preamble, to assist EPA compliance inspectors in determining whether a renovator at a renovation work site successfully completed an accredited renovator training course, this final rule also requires providers of renovator training to take a digital photograph of each individual who successfully completes a renovator training course, include that photograph on the individual's course completion certificate, and provide that photograph to EPA along with the training course provider's post-training notification required by 40 CFR 745.225(c)(14).

Training course providers that obtained accreditation to offer renovator or dust sampling technician training would have to comply with the existing recordkeeping requirements for lead-based paint activities training course providers. These existing recordkeeping provisions require providers to maintain records of course materials, course test blueprints, information on how hands-on training is delivered, and the results of the students' skills assessments and course tests. EPA received no comments on this aspect of the proposed recordkeeping requirements. These requirements are currently working well for lead-based paint activities training providers and EPA believes they will work equally well for renovation training providers. Therefore, EPA is finalizing this requirement as proposed. Training course providers who receive accreditation to provide renovator or dust sampling technician courses must comply with the recordkeeping requirements of 40 CFR 745.225(i).

1. *Renovator training.* The minimum curriculum requirements for an initial renovator course are described in 40 CFR 745.225(d)(6). The topics include the roles and responsibilities of a renovator; background information on lead and its health effects; background on applicable Federal, State, and local regulations and guidance; use of acceptable test kits to test paint to determine whether it is lead-based paint; methods to minimize the creation of lead-based paint hazards during renovations; containment and clean-up methods; ways to verify that a renovation project has been properly completed, including cleaning verification; and waste handling and disposal. Hands-on activities relating to renovation methods, containment and clean-up, cleaning verification, and waste handling would be required in all courses. Section 745.225(c)(6)(vi) establishes the minimum length for an initial renovator course at 8 training hours, with 2 hours being devoted to hands-on activities.

Commenters raised concerns and had suggestions regarding how certified renovator training should be conducted in three broad areas: Course length; course content and format; and training of non-English speaking renovators.

a. *Course length.* Several commenters raised concerns about the length of the certified renovator training course. Some agreed with the

training length as defined in the rule, others stated it was too short or too long, and one said that the length of the training should not be defined in the rule. In establishing the minimum requirements for the renovator course, the Agency considered the many types of activities that would likely be performed during renovation, remodeling, and painting activities and tried to balance that with the need for a training course that would address the necessary skills without being overly burdensome on the part of the trainee. The suggested course schedule for the EPA/HUD lead-safe work practices curriculum “Lead Safety for Remodeling, Repair, & Painting” calls for an 8-hour training day, including lunch, two breaks, and an hour-long course test. The course is designed in a modular format, so that it can be delivered in 1 day or over two or more days, at the discretion of the training provider. Based on a review of the material and the suggested schedule, EPA believes that “Lead Safety for Remodeling, Repair, and Painting” can be modified to include material on the use of test kits and performing cleaning verification and still fit within eight training hours. However, any attempt to cover all of the required elements in a shorter period of time would likely result in a significant reduction in the level of detail with which the elements are presented. A minimum requirement for eight training hours represents a reasonable minimum requirement for the renovator course and gives training course providers an indication of the amount of time that EPA has determined through experience with the EPA/HUD curriculum that it takes to adequately cover each required training element.

b. *Course content and format.* Most commenters agree that the certified renovator course should include a hands-on training portion and several of these agree that the hands-on portion should not be any shorter than two hours as proposed. Other commenters suggested that the hands-on portion of the training should be allowed to be conducted as a demonstration via a remote delivery system (DVD or Internet). EPA agrees that development of a procedure to address the hands-on component of the renovator course via remote delivery systems would be beneficial. This final rule does not preclude training providers from developing alternative methods for the delivery and evaluation of training for submission for approval to EPA.

Several commenters had suggestions as to the certified renovator training content. Two recommended that the renovator course include training on recordkeeping requirements. EPA agrees with these commenters, and has added the element of recordkeeping to the required training course elements for renovators. Because EPA has modified the recordkeeping requirements, as discussed below, to require the certified renovator to prepare the records associated with renovations to which he or she is assigned, the renovation training course will include a recordkeeping component. Three commenters suggested that, if the certified renovator is responsible for providing OJT to other renovation workers, the renovator training course should

include a train-the-trainer component. EPA agrees with these commenters and has added a train-the-trainer element to the required elements for renovator training course. In addition, EPA will develop a train-the-trainer component for its model renovator training course. Other commenters suggested that the required training elements include OSHA health and personal safety requirements. The Agency agrees that these are relevant topics and considers an overview of the OSHA requirements to be part of the required element of background on applicable Federal, State, and local regulations and requirements. To ensure that this is clear, EPA has modified this provision to state that the background information must include EPA, HUD, OSHA, and other Federal, State, and local regulations and guidance. Consistent with its approach in other courses related to lead-based paint activities, the Agency believes that identifying potential OSHA requirements, rather than requiring in-depth curriculum components, is the best way to make trainees aware of those requirements and yet avoid redundancies between EPA- and OSHA-required courses.

c. Training of non-English speaking renovators. Renovator and dust sampling technician courses, both initial and refresher, can be taught in any language, but accreditation would be required for each specific language the provider wished to present the course in. All course materials and instruction for the course would have to be in the language of the course. The modification to § 745.225(b)(1)(ii) clarifies that all lead-based paint courses taught in different languages are considered different courses, and accreditation must be obtained for each. To facilitate accreditation of courses in languages other than English, EPA is requiring that the training provider include in its application both the English version as well as the non-English version of all training materials, in addition to a signed statement from a qualified, independent translator that the translator has compared the non-English language version of the course materials to the English-language version and that the translation is accurate. This requirement applies to any course for which accreditation is sought, including lead-based paint activities courses. Finally, to assist EPA in monitoring compliance with these requirements, EPA is requiring that course completion certificates include the language in which the course was taught.

Several commenters agreed that the needs of non-English speaking workers should be considered. Commenters suggested that EPA translate its model course into other languages and/or facilitate free access to such translations. EPA agrees that it is important to have renovator training available in languages other than English. EPA anticipates translating its revised model renovator course into Spanish. EPA will also consider translating the course into other languages. However, EPA is not able to make available proprietary material developed by training course providers that is then translated by those providers into other languages.

2. *Dust sampling technician training.* The minimum curriculum requirements for an initial dust sampling technician course are described in 40 CFR 745.225(d)(7). The topics include the roles and responsibilities of a dust sampling technician; background information on lead and its adverse health effects; background information on Federal, State, and local regulations and guidance that pertains to lead-based paint and renovation activities; dust sampling methodologies; clearance standards and testing; and report preparation and recordkeeping requirements. Section 745.225(c)(6)(vii) establishes the minimum length for an initial dust sampling technician course at 8 training hours, with 2 hours being devoted to hands-on activities. EPA received relatively few comments specifically on the content of dust sampling technician training; most had to do with the length of the training course. EPA has developed a model dust sampling technician course (Ref. 33). This course has been designed to be delivered in one eight-hour training day, including lunch, breaks, and a course test. As with the EPA/HUD “Lead Safety for Remodeling, Repair, & Painting” curriculum, EPA believes that this is a reasonable minimum requirement for the dust sampling technician course and it gives training course providers an indication of the amount of time that EPA has determined it takes to adequately cover each required training element.

E. Work Practices

This final rule requires that all renovations subject to this rule be conducted in accordance with a defined set of work practice standards. Again, this final rule is a revision of the existing TSCA section 402(a) Lead-based Paint Activities Regulations to extend training, certification, and work practice requirements to certain renovation and remodeling project in target housing and child occupied facilities. In so doing, EPA did not merely modify the scope of the current abatement requirements to cover renovation and remodeling activities. Rather, EPA has carefully considered the elements of the existing abatement regulations and is revising those regulations in a manner that reflects the differences between abatement and renovation activities.

Work practices for abatement are part of larger range of activities that are intended to identify and eliminate lead-based paint hazards. When abatements are conducted, residents typically are removed from the home until after the abatement activities are completed, which is demonstrated through the use of clearance testing. This may require the removal of carpeting, refinishing, sealing, or replacement of floors to achieve clearance. Accordingly, clearance testing is part of a broader set of activities that comprise abatement, with the purpose of permanently eliminating existing lead-based paint hazards.

Renovation, repair, and painting activities typically are conducted while the residents are present in the dwelling and are not activities intended to eliminate lead-based paint hazards. Work practices for

renovation, repair, and painting are designed to minimize exposure to lead-based paint hazards created by the renovation both during the renovation, while residents are likely to be present in the dwelling, and after the renovation. The work practices are not intended to address pre-existing hazards.

1. *In general.* This final rule incorporates work practice standards generally derived from the HUD Guidelines, EPA's draft technical specifications for renovations, and the model training curriculum entitled "Lead Safety for Remodeling, Repair, & Painting" (Refs. 18, 34, and 35). For more information on the development of these documents, please consult Unit III.C of the preamble to the 2006 Proposal. To reduce exposure to lead-based paint hazards created by renovation activities, the work practices standards in this regulation provide basic requirements for occupant protection, site preparation, and clean-up.

Commenters generally felt that work practices are important and should be clear and correctly followed. One commenter stated that the rule has "tremendous potential for making a difference," especially in establishing and "reinforcing the industry norm." One commenter noted that EPA should "set simple and flexible work practices." Another commenter asked for less specificity. EPA believes that this final rule provides certified renovators an appropriate blend of flexibility and specificity. EPA believes that, due to the highly variable nature of renovation activities, flexibility is needed for certain tasks, such as establishing containment, and that other tasks, such as specialized cleaning, require a greater degree of specificity.

2. *Occupant protection.* This final rule requires the firm to post signs clearly defining the work area and warning occupants and other persons not involved in renovation activities to remain outside of the work area. In addition, it requires that the certified renovator be physically present at the work site when the required signs are posted. These signs must be posted before beginning the renovation and must remain in place until the renovation has been completed and cleaning verification has been completed. The signs must be, to the extent practicable, provided in the occupants' primary language. If warning signs have been posted in accordance with HUD's Lead Safe Housing Rule (24 CFR 35.1345(b)(2)) or OSHA's Lead in Construction Standard (29 CFR 1926.62(m)), additional signs are not required.

Three commenters stated that the required signs for posting at a work site should be in the language of the occupant. One commenter stated that such a requirement would be consistent with HUD's Lead Safe Housing Rule requirements. EPA agrees that having signs in the language of the occupant is preferable. However, the Agency is concerned that renovators will not have the ability to provide signs in every language, and that it may be the case that occupants, especially in multi-family dwellings, will speak a variety of languages. In the HUD Lead Safe Housing Rule, HUD addressed this issue by requiring that

signs, to the extent practicable, be provided in the occupants' primary language. Therefore, consistent with HUD's Lead Safe Housing Rule, this final rule requires warning signs, to the extent practicable, to be provided in the occupants' primary language.

3. *Containment.* This final rule requires that the firm isolate the work area so that dust or debris does not leave the work area while the renovation is being performed. In addition, EPA has clarified that the firm must maintain the integrity of the containment by ensuring that any plastic or other impermeable materials are not torn or displaced, and taking any other steps necessary to ensure that dust or debris does not leave the work area while the renovation is being performed.

In addition, EPA has made conforming changes to the performance standard that renovators and renovation firms are being held to in this final rule. EPA was concerned that the rule text and preamble were confusing because there were references to "visible" dust and debris or "identifiable" dust and debris and "all" dust and debris. For example, in the 2006 Proposal "work area" was defined as the area established by the certified renovator to "contain all the dust and debris generated by a renovation." In the renovator responsibilities (as proposed at 40 CFR 745.90(b)(4)), the renovator was responsible for ensuring "that dust and debris is not spread beyond the work area." In describing the containment to be established, the rule text referred to "visible" dust and debris and in the section on waste from renovations (as proposed at 40 CFR 745.85(a)(3)) the rule text referred to "identifiable" dust. It was not EPA's intention to create subjectivity as to whether dust and debris were being dispersed. By conforming its terminology EPA is clarifying that certified renovators and renovation firms must ensure that the dust and debris (as opposed to "visible" or "identifiable" dust and debris) generated by the renovation is contained. Should an EPA inspector observe dust or debris escaping from the containment, the certified renovator and the renovation firm would be in violation of this final rule.

This final rule also requires that the certified renovator be physically present at the work site when the required containment is established. This means the certified renovator must determine for each regulated project the size and type of containment necessary to prevent dust and debris from leaving the established work area. This determination will be based on the certified renovator's evaluation of the extent and nature of the activity and the specific work practices that will be used.

Containment refers to methods of preventing leaded dust from contaminating objects in the work area and from migrating beyond the work area. It includes, among other possible measures, the use of disposable plastic drop cloths to cover floors and objects in the work area, and sealing of openings with plastic sheeting where necessary to

prevent dust and debris from leaving the work area. When planning a renovation project, it is the certified renovator's responsibility to determine the type of work site preparation necessary to prevent dust and debris from leaving the work area.

Renovation projects generate varying amounts of leaded dust, paint chips, and other lead-contaminated materials depending on the type of work, area affected, and work methods used. Because of this variability, the size of the area that must be isolated and the containment methods used will vary from project to project. Large renovation projects could involve one or more rooms and potentially encompass an entire home or building, while small projects may require only a relatively small amount of containment. The necessary work area preparations will depend on the size of the surface(s) being disturbed, the method used in disturbing the surface, and the building layout. For example, repairing a small area of damaged drywall would most likely require the containment of a smaller work area and less preparation than demolition work, which would most likely require a containment of a larger work area and more extensive preparation in order to prevent the migration of dust and debris from the work area. The Environmental Field Sampling Study, which found that the following activities created dust-lead hazards at a distance of 6 feet from where the work was being performed:

- Paint removal by abrasive sanding.
- Window replacement.
- HVAC duct work.
- Demolition of interior plaster walls.
- Drilling into wood.
- Sawing into wood.
- Sawing into plaster.

Based on these data, EPA believes that at least 6 feet of containment is necessary to contain dust generated by most renovation projects.

Under this final rule, at a minimum, interior work area preparations must include removing all objects in the work area or covering them with plastic sheeting or other impermeable material. This includes fixed objects, such as cabinets and countertops, and objects that may be difficult to move, such as appliances. Interior preparations must also include closing all forced air HVAC ducts in the work area and covering them with plastic sheeting or other impermeable material; closing all windows in the work area; closing and sealing all doors in the work area; and covering the floor surface in the work area, including installed carpet, with taped-down plastic sheeting or other impermeable material in the work area 6 feet beyond the perimeter of surfaces undergoing

renovation or a sufficient distance to contain the dust, whichever is greater.

To ensure that dust and debris do not leave the work area, it may be necessary to close forced air HVAC ducts or windows near the work area. Doors within the work area that will be used while the job is being performed must be covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through, while confining dust and debris to the work area. In addition, all personnel, tools, and other items, including the exterior of containers of waste, must be free of dust and debris when leaving the work area.

For exterior projects, the same performance standard applies; namely, the certified renovator or a worker under the direction of the certified renovator must contain the work area so that dust or debris does not leave the work area while the renovation is being performed. Additionally, in response to comments suggesting that EPA follow the HUD Guidelines with respect to exterior containment requirements, EPA has incorporated a similar 10 foot minimum. Consequently, this final rule requires that exterior containment include covering the ground 10 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to collect falling paint debris, whichever is greater, unless the property line prevents 10 feet of such ground covering. EPA has concluded that this is an appropriate and reasonable precaution for exterior work, given the fact that some amount of dispersal of dust or debris is likely as a result of air movement, even on relatively calm days. In addition, EPA sees value in maintaining appropriate consistency between this regulation and related HUD rules and guidelines.

In addition to such ground covering, exterior work area preparations must include, at a minimum, closing all doors and windows within 20 feet of the outside of the work area on the same floor as the renovation, and closing all doors and windows on the floors below that area. For example, if the renovation involves sanding a 5-foot by 5-foot area of paint in the middle of the third floor of a building, and that side of the building is only 40 feet long, all doors and windows on that side of the third floor must be closed, as well as all of the doors and windows on that side of the second and first floors. In situations where other buildings are in close proximity to the work area, where the work area abuts a property line, or weather conditions dictate the need for additional containment (i.e., windy conditions) the certified renovator or a worker under the direction of the certified renovator performing the renovation may have to take extra precautions in containing the work area to ensure that dust and debris from the renovation does not contaminate other buildings or migrate to adjacent property. This may include erecting vertical containment designed to prevent dust and debris from contaminating the ground or any object beyond the work area. In addition, doors within the work area that will be used while the job is being performed must be covered with plastic

sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area.

Some commenters agreed with the proposed procedures. One commenter agreed that with containment, dust can be contained and cleaned up sufficiently to pass the wipe test screening results. Another commenter supported the use of standard containment and cleaning practices known to reduce dust lead levels on both interior and exterior surfaces and to protect soils and gardens surrounding the house.

Some commenters asserted that the containment procedures were not stringent enough. Some suggested that EPA follow the HUD Guidelines with respect to exterior containment requirements. Others asked EPA to strengthen exterior containment requirements by specifying that containment extend at least twenty feet to collect all debris and residue and that the rule address circumstances such as wind and rain. One commenter asserted that allowing the certified renovator complete discretion to determine what is appropriate renders the worksite containment requirements completely unenforceable and asked EPA to consider providing a minimum performance standard that all renovators must meet. EPA agrees that a minimum performance standard is necessary and that is why under this final rule EPA is requiring certified renovators to establish containment that prevents dust and debris from leaving the work area. In addition, in this rule EPA has established minimum containment requirements for both interior and exterior renovation requirements. While the certified renovator has discretion regarding the specific components and extent of containment, the renovator and firm will be in violation of this final rule if dust or debris leaves the work area for both interior and exterior renovations. If dust or debris migrates beyond the work area, that migration constitutes a violation of the rule. Accordingly, EPA does not agree with the commenter that the rule is unenforceable.

This final rule provides the certified renovator with some discretion to define the specific size and configuration of the containment to accommodate the variability in size and scope of renovations. EPA considered requiring that in all cases the entire room in which a renovation is occurring be contained, but concluded that doing so would be unwarranted. For example, a small manual sanding job in a large room would not necessarily require full room containment to isolate the work area. EPA has concluded that the most appropriate approach is to impose a minimum size for containment coupled with a performance standard--preventing dust or debris from leaving the work area--and to prescribe with reasonable specificity the containment measures that are required--e.g., use of plastic or other impermeable material, removal or covering of objects in the work area - but to provide some measure of discretion with regards to the case-specific approaches to containment.

In response to EPA's request for comments on whether there are any situations where some or all of the proposed work practices are not necessary, commenters suggested that work practices were not needed during a gut rehabilitation, although two of the commenters suggested a waiver rather than an exemption in these situations. Several commenters thought that work in unoccupied structures should not require the use of lead safe work practices, or should have an adapted set of work practices. A commenter opined that certain interior containments may not be necessary in vacant and empty housing, but that exterior work always should use lead safe work practices to protect the environment and neighborhood. A commenter stated that there are certain activities common to multifamily and rental housing that warrant special consideration from the Agency. For example, simple painting activities that occur when rental properties turn over should not require a full suite of work practices, particularly given that most state laws require apartment owners to paint each unit at turnover. The commenter suggested that EPA consider a less restrictive set of guidelines for those properties simply undergoing routine painting during the turnover process.

EPA believes that whole house gut rehabilitation projects may demolish and rebuild a structure to a point where it is effectively new construction. In this case, it would not be a modification of an existing structure, and therefore not a renovation. However, a partial-house gut rehabilitation such as a kitchen or bathroom gut rehabilitation project clearly falls within the scope of this final rule.

EPA disagrees that temporarily unoccupied or vacant housing should be *per se* exempt from the requirements of this final rule. EPA's primary concern with exempting renovations in such housing from the work practices required by this final rule is the exposure to returning residents to lead-based paint hazards created by the renovation. However, EPA recognizes that if no child under 6 or no pregnant woman resides there, the owner-occupant may so state in writing and the requirements of this rule would not apply. In addition, for routine painting, such as at unit turnover, if such painting activity does not involve disturbing more than 6 ft² of painted surfaces per room for interiors or 20 ft² for exteriors, and otherwise meet the definition of "minor repair and maintenance," the requirements of this final rule would not apply. EPA cannot see a basis for imposing a less restrictive set of requirements for projects that disturb more than 6 ft² of painted surfaces per room for interiors or 20 ft² for exteriors.

Some commenters believed that the proposal did not adequately address the decontamination of workers and equipment involved in a renovation. They supported the proposed requirement that all personnel, tools and other items, including the exteriors of containers of waste, be free of dust and debris before leaving the work area. However, they believed that the proposed alternative, covering the paths used to reach the exterior of the building with plastic, was not

sufficiently protective. One contended that significant lead dust contamination can be tracked or carried out of a work area if workers and equipment are not properly decontaminated. This commenter further noted that workers with contaminated clothing can take that contamination home to their own children and taking contaminated equipment to another jobsite could potentially create a lead hazard at a new site. EPA agrees with these commenters and has deleted the alternative language. The final rule requires renovation firms to use precautions to ensure that all personnel, tools and other items, including the exteriors of containers of waste, to be free of dust and debris before leaving the work area. There are several ways of accomplishing this. For example, tacky mats may be put down immediately adjacent to the plastic sheeting covering the work area floor to remove dust and debris from the bottom of the workers' shoes as they leave the work area, workers may remove their shoe covers (booties) as they leave the work area, and clothing and materials may be wet-wiped and/or HEPA-vacuumed before they are removed from the work area.

Finally, in response to a commenter who was concerned about containment not impeding occupant egress in an emergency, EPA has modified the regulatory text to specify that containment must be installed in such a manner that it does not interfere with occupant and worker egress in an emergency. This can be accomplished, as noted in Chapter 17 of the HUD Guidelines, by installing plastic over doors with a weak tape.

4. *Prohibited and restricted practices.* The final rule prohibits or restricts the use of certain work practices during regulated renovations. These practices are open flame burning or torching of lead-based paint; the use of machines that remove lead-based paint through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting, unless such machines are used with HEPA exhaust control; and operating a heat gun above 1100 degrees Fahrenheit. These are essentially the same practices as are currently prohibited or restricted under the Lead-based Paint Activities Regulations, 40 CFR 745.227(e)(6), with the exception of dry hand scraping of lead-based paint. While this final rule and EPA's Lead-Based Paint Activities Regulations do not prohibit or restrict the use of volatile paint strippers or other hazardous substances to remove paint, the use of these substances are prohibited for use in poorly ventilated areas by HUD's Lead Safe Housing Rule and they are regulated by OSHA.

EPA did not propose to prohibit or restrict any work practices, but instead asked for public comment regarding their prohibition or restriction. The Agency was concerned that, because these practices are commonly used during renovation work, prohibiting such practices could make certain jobs, such as preparing detailed or historic millwork for new painting, extremely difficult, if not impossible. In addition, EPA believed that use of the proposed package of training, containment,

cleanup, and cleaning verification requirements would be effective in preventing the introduction of new lead-based paint hazards, even when such practices were used. EPA is modifying the proposal based on new data evaluating specific work practices and in response to comments received.

a. *The Dust Study.* EPA understood when developing the proposed rule that considerable data existed showing the potential for significant lead contamination when lead paint is disturbed by practices restricted under EPA's Lead-based Paint Activities Regulations for abatements. EPA conducted the Dust Study, in part, to determine the effectiveness of the proposed work practices. The Dust Study evaluated a variety of renovation activities, including activities that involved several practices restricted or prohibited under the abatement regulations. For example, power planing was included in Dust Study as a representative of machines that remove lead-based paint through high speed operation. Similarly, the Dust Study also included experiments with power sanding and a needle gun. Each of these activities generated very high levels of dust. The Dust Study thus evaluated the proposed work practice standards, using a range of typical practices currently used by contractors.

In particular, the Dust Study found that renovation activities involving power planing and high temperature heat gun resulted in higher post-job renovation dust-lead levels than activities using other practices. The geometric mean post-work, pre-cleaning floor dust lead levels in the work room were 32,644 $\mu\text{g}/\text{ft}^2$ for power planing and 7,737 $\mu\text{g}/\text{ft}^2$ for high temperature heat guns. More importantly, in experiments performed in compliance with this rule's requirements for containment, cleaning, and cleaning verification, the geometric mean post-job floor dust lead levels were still 148 $\mu\text{g}/\text{ft}^2$ for power planing, well over the TSCA section 403 hazard standard for floors. While the geometric mean post-job floor dust levels for the 3 similar experiments involving high temperature heat guns, i.e., experiments performed in compliance with this rule's requirements, were 36 $\mu\text{g}/\text{ft}^2$, the average post-cleaning-verification floor dust lead levels for the individual experiments were 147.5, 65.5, and less than 10 $\mu\text{g}/\text{ft}^2$. Thus, in 2 of these 3 experiments, the requirements of this final rule were insufficient to reduce the floor dust lead levels below the TSCA section 403 hazard standards for floors. In addition, power planing and use of a high temperature heat gun generated fine particle-size dust that was difficult to clean. In fact, almost all of the high post-renovation lead levels were associated with activities involving power planing and high temperature heat guns. Moreover, activities involving power planing and high temperature heat gun jobs also resulted in higher post-job tool room and observation room lead levels than other practices.

Thus, while the Dust Study confirmed that most practices prohibited or restricted under EPA's Lead-based Paint Activities Regulations do indeed produce large quantities of lead dust, it also

demonstrated that, with respect to lead-based paint hazards created by machines that remove lead-based paint through high speed operation and high temperature heat guns, the use of the proposed work practices were not effective at containing or removing dust-lead hazards from the work area.

b. *Alternatives to certain practices.* As discussed above, in the proposed rule, EPA stated a concern that, because practices prohibited or restricted under EPA's Lead-based Paint Activities Regulations are commonly used during renovation work, prohibiting or restricting such practices could make certain jobs, such as preparing detailed or historic millwork for new painting, extremely difficult or, in some cases, impossible. In response to its request for comment, the Agency received information on techniques including benign strippers, steam stripping, closed planing with vacuums, and infrared removal that the commenter believed are far superior, far safer and far cheaper than some of the traditionally prohibited or restricted practices. Another commenter noted that window removal and off-site chemical stripping in a well-ventilated setting is an alternative to using heat or mechanical methods to remove lead paint on-site. Alternatively, chemical strippers can be used on-site, given adequate ventilation and protection for workers and building occupants. EPA is therefore persuaded that there are sufficient alternatives to these practices.

c. *Conclusion.* Based on the results of the Dust Study and in response to the voluminous persuasive public comments, this final rule prohibits or restricts the use of the following practices during renovation, repair, and painting activities that are subject to the work practice requirements of this rule:

- Open-flame burning or torching;
- Machines that remove lead-based paint through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting, unless such machines are used with HEPA exhaust control; and
- Operating a heat gun above 1100 degrees Fahrenheit.

EPA has concluded that these practices must be prohibited or restricted during renovation, repair, and painting activities that disturb lead-based paint because the work practices in this final rule are not effective at containing the spread of leaded dust when these practices are used, or at cleaning up lead-based paint hazards created by these practices. Thus, the work practices are not effective at minimizing exposure to lead-based paint hazards created during renovation activities when these activities are used.

This final rule does not prohibit or restrict the use of dry hand scraping. EPA has concluded based primarily on the Dust Study as corroborated by other data described below that it is not necessary to

prohibit or restrict dry scraping because the containment, cleaning, and cleaning verification requirements of this rule are effective at minimizing exposure to lead-based paint hazards created by renovations and the migration of dust-lead hazards beyond the work area when dry hand scraping is employed.

The Dust Study evaluated dry hand scraping, which is restricted under EPA's lead abatement program. In contrast to the results of the activities using power planing and high temperature heat gun, average post-job dust lead levels in the two experiments in which paint was disturbed by dry hand scraping and the work practices required by this rule were used were below the regulatory dust-lead hazard standard for floors. In addition, the National Institute for Occupational Safety and Health (NIOSH) conducted a Health Hazard Evaluation (HHE) at the request of the Rhode Island Department of Health, and published a final report in June of 2000 (Ref. 36). The purpose of the evaluation was to measure worker exposure during various tasks and to determine whether workers were exposed to hazardous amounts of lead-based paint. Notably worker exposures were compared when scraping painted surfaces using wet and dry scraping methods (wet scraping is the customary substitute for dry scraping in abatement applications). A comparison of worker exposure found statistically equivalent worker exposures. Based on the NIOSH study, EPA has determined that dry scraping is the equivalent of its only practical alternative, wet scraping.

In sum, EPA has determined based on the studies described above and the persuasive comments, including those summarized below, provided by the overwhelming majority of commenters that its approach of prohibiting or restricting certain practices in combination with the containment, cleaning, and cleaning verification, will be effective in minimizing exposure to lead-based paint hazards created during renovation activities, provide an appropriate measure of consistency with other regulatory programs, and cause minimal disruption for renovation firms.

i. *Substantial exposures.* Numerous commenters argued that the rule should prohibit certain practices based on potential health hazards, many backed up by well-documented scientific studies and proven health-protective standards. One commenter stated, after citing several scientific studies, that removing or disturbing lead paint without proper controls causes substantial contamination, posing serious risks to occupants, workers and others. Another cited numerous scientific studies demonstrating the adverse public health implications of permitting these work practices and the availability of alternative work methods. Still another cited the EPA renovation and remodeling study and a State of Maryland study as evidence that prohibited work practices may be associated with elevated blood lead levels. One commenter cited health hazard evaluations of residential lead renovation work showing that these activities produce hazardous worker exposures. Another commenter noted that the hazards of

activities that are likely to produce large amounts of lead dust or fumes are well documented, stating that, for example, the Wisconsin Childhood Blood-Lead Study found that the odds of a resident child having a blood lead level in excess of 10 µg/dL increased by 5 times after renovation using open flame torching, and by 4.6 times after heat gun use. Another commenter was concerned that previously collected data may not account for different particle-size distribution, a factor in both the potential cleaning efficacy of work areas and the toxicology of lead poisoning.

ii. *Consistency with other standards.* Some commenters urged EPA to prohibit certain high dust generating practices for the sake of consistency with other work practice standards. Numerous commenters asserted EPA's rule should be consistent with HUD requirements to avoid confusion on the part of contractors and to conform to the standard that has been in place for nearly 6 years. One commenter noted that the regulations of several other federal agencies that administer housing programs, such as the Department of Defense, Department of Agriculture, and Veterans Affairs include prohibited practices. Other commenters noted that the proposed rule conflicted with OSHA rules and would cause confusion among contractors.

Some commenters noted that EPA's proposed rule would conflict with individual state or local regulations prohibiting some or all of these practices. One commenter listed the following states and some cities that have prohibited work practices: California, Indiana, Maine, Massachusetts, Minnesota, New Jersey, Ohio, Rhode Island, Vermont, Wisconsin, Chicago, Cleveland, New Orleans, New York City, Rochester, and San Francisco. Two commenters cited state law in Indiana, under which certain work practices are prohibited and contractors using such work practices are committing a Class D felony (422, 449).

Other commenters noted that practices that are prohibited under EPA's Lead-based Paint Activities Regulations should also be prohibited for renovation work in pre-1978 properties, and noted that in developing the abatement rule EPA demonstrated through its own studies that these practices may increase the risk of elevated blood lead levels in children.

5. *Waste from renovations.* Under this final rule the certified renovator or a worker trained by and under the direction of the certified renovator is required to ensure that all personnel, tools, and other items including waste are free of dust and debris when leaving the work area. The certified renovator or a worker trained by and under the direction of the certified renovator must also contain waste to prevent releases of dust and debris before the waste is removed from the work area for storage or disposal. If a chute is used to remove waste from the work area, it must be covered. At the conclusion of each work day and at the conclusion of the renovation, the certified renovator or a worker

trained by and under the direction of the certified renovator must ensure that waste that has been collected from renovation activities is stored under containment, in an enclosure, or behind a barrier that prevents release of dust and debris from the work area and prevents access to dust and debris. This final rule also requires the certified renovator or a worker trained by and under the direction of the certified renovator transporting lead-based paint waste from a work site to contain the waste to prevent releases, e.g., inside a plastic garbage bag. As described in more detail in Unit IV.D.2.c. of the preamble to the 2006 Proposal, EPA revised its solid waste regulations in 40 CFR parts 257 and 258 to make clear that lead-based paint waste generated through renovation and remodeling activities in residential settings may be disposed of in municipal solid waste landfill units or in construction and demolition (C&D) landfills. Requirements for waste disposal may vary by jurisdiction and state and local requirements may be more stringent than Federal requirements. When disposing of waste, including waste water, from renovation activities, the renovation firm must ensure that it complies with all applicable Federal, State, and local requirements.

One commenter suggested that EPA should consider requiring that lead-contaminated waste be stored in a locked area or in a lockable storage container. This commenter also suggested that to prevent any confusion on what constitutes a covered chute, a definition or clarification should be provided in the rule. Another commenter recommended the use of “sealed” rather than “covered” chutes for waste removal, as a covered chute may not be protective enough to prevent the release of significant amounts of lead-contaminated dust. This final rule requires that waste must be contained to prevent releases of dust and debris before the waste is removed from the work area for storage or disposal. With respect to the use of chutes for waste removal, the requirement for a covered chute was proposed merely to facilitate the removal of bagged or sealed waste so that it is deposited in an appropriate waste disposal container and does not fall to the ground. EPA does not, therefore, believe that this term either needs to be further defined or to require the use of a “sealed” chute.

EPA understands that renovation projects can generate a considerable amount and variety of waste material. However, EPA believes that the requirements of the final rule protect occupants and others from potential lead-based paint hazards presented by this waste. While storing the waste in a locked container is one way to meet the performance standard of this final rule, EPA does not believe that is necessary to specify that as a requirement. The waste may be stored in the work area, which will already be delineated with signs cautioning occupants and other to keep out. EPA believes the owner/occupants have some responsibility for observing these signs. Renovation sites pose potential hazards other than lead-based paint hazards—including the potential fall hazards, sharp protrusions, etc. In sum, the certified

renovator is responsible for ensuring that lead-contaminated building components and work area debris that are stored under containment, in an enclosure, or behind a barrier that prevents release of dust and debris and prevents access to the debris. Under this final rule the certified renovator must ensure that waste leaving the work area is contained (e.g., in a heavy duty plastic bag or sealed in plastic sheeting) and free of dust or debris. This imposes a reasonable performance standard without requiring a specific approach. The certified renovator is responsible for evaluating the waste generated and the characteristics of the work site to determine the most effective way of meeting this standard.

6. *Cleaning the work area—a. Final rule requirements.* Under this final rule the certified renovator or a worker under the direction of the certified renovator must clean the work area to remove dust, debris or residue. All renovation activities that disturb painted surfaces can produce dangerous quantities of leaded dust. Because very small particles of leaded dust are easily absorbed by the body when ingested or inhaled, it can create a health hazard for children. Unless this dust is properly removed, renovation and remodeling activities are likely to introduce new lead-based paint hazards. Therefore, the rule requires prescriptive cleaning practices. Ultimately, improper cleaning can increase the cost of a project because additional cleaning may be necessary during post-renovation cleaning verification.

This final rule requires that, upon completion of interior renovation activities, all paint chips and debris must be picked up. Protective sheeting must be misted and folded dirty side inward. Sheeting used to isolate contaminated rooms from non-contaminated rooms must remain in place until after the cleaning and removal of other sheeting; this sheeting must then be misted and removed last. Removed sheeting must be either folded and taped shut to seal or sealed in heavy-duty bags and disposed of as waste. After the sheeting has been removed from the work area, the entire area must be cleaned including the adjacent surfaces that are within 2 feet of the work area. The walls, starting from the ceiling and working down to the floor, must be vacuumed with a HEPA vacuum or wiped with a damp cloth. The final rule requires that all remaining surfaces and objects in the work area, including floors, furniture, and fixtures be thoroughly vacuumed with a HEPA vacuum. When cleaning carpets, the HEPA vacuum must be equipped with a beater bar to aid in dislodging and collecting deep dust and lead from carpets. The beater bar must be used on all passes on the carpet face during dry vacuuming. This cleaning step is intended to remove as much dust and remaining debris as possible. After vacuuming, all surfaces and objects in the work area, except for walls and carpeted or upholstered surfaces, must be wiped with a damp cloth. Wet disposable cleaning cloths of any color may be used for this purpose. In contrast, as discussed in the next section, only wet disposable cleaning cloths that are white may be used for cleaning

verification. Uncarpeted floors must be thoroughly mopped using a 2-bucket mopping method that keeps the wash water separate from the rinse water, or using a wet mopping system with disposable absorbent cleaning pads and a built-in mechanism for distributing or spraying cleaning solution from a reservoir onto a floor.

When cleaning following an exterior renovation, all paint chips and debris must be picked up. Protective sheeting used for containment must be misted with water. All sheeting must be folded from the corners or ends to the middle to trap any remaining dust and either taped shut to seal or sealed in heavy duty bags. The sheeting must be disposed of as waste.

b. *Comments on the cleaning protocol.* Several commenters proposed minor changes to the cleaning procedures. Three commenters recommended that daily clean-up be required for projects lasting more than 1 day. One commenter stated that all tools and equipment should be cleaned prior to leaving the job site. One commenter indicated concern that there is no mention of wet wiping areas such as window sills. This final rule requires cleaning both in and around the work area to ensure no dust or debris remains following the renovation. The final rule also requires that all personnel, tools, and other items including waste are free of dust and debris when leaving the work area. EPA recommends that contractors keep work areas as clean and free of dust and debris as practical. Daily cleaning is a good practice, and it may be necessary in some cases to ensure no dust or debris leaves the work area as required by this final rule. However, EPA has no basis to believe that daily cleaning is necessary in every case or even most cases. EPA also notes that the work area must be delineated by signs so that occupants and others do not enter the area. This final rule requires the work area to be contained, and to ensure that all tools, personnel, and other items, including waste, to be free of dust and debris when leaving the work area. Under this final rule, interior windowsills and most other interior surfaces in the work area must be wet wiped. The exceptions are upholstery and carpeting, which must be vacuumed with a HEPA vacuum, and walls, which may be wet wiped or vacuumed with a HEPA vacuum.

Some commenters requested clarification of the requirement to clean “in and around the work area.” In response to the two commenters that noted that the HUD Guidelines recommend cleaning 2 feet beyond the work area, EPA has modified the regulatory text to require cleaning of surfaces and objects in and within 2 feet of the work area.

One commenter argued that vacuuming was not necessary because 40 CFR 745.85 requires the certified renovator to cover all furnishings not removed from the work area, so additional cleaning is unnecessary. EPA disagrees with this commenter. Carpets and upholstered objects that remained, covered with plastic, in the work area during the

renovation must be vacuumed after the plastic is removed to ensure that the surfaces did not become contaminated during the renovation due to a breach in the containment or during the removal of the containment during clean-up.

One commenter asserted that some requirements for cleaning were not prescriptive enough. The commenter suggested that the rule text, which states that the certified renovator or a worker under the direction of the certified renovator must “pick up all paint chips and debris,” could be re-worded to state that the certified renovator or a worker under the direction of the certified renovator must “collect all paint chips, debris, and dust, and, without dispersing any of it, seal this material in a heavy-duty plastic bag.” EPA agrees that additional detail would be helpful in this instance and has modified the final rule to include this recommendation, with the exception of dust, which is collected when the protective sheeting is misted and folded inward.

One commenter stated that the cleaning procedures were excessive and problematic. This commenter asserted that the two-bucket mopping system is inappropriate for some floor types such as wood floors for which excessive water could damage the floor. The commenter suggested that EPA allow a cleaning method employing a dry or damp cloth, or any other specified methodology, to be used in order to achieve a no dust or debris level of cleaning. Three commenters asserted that EPA’s definition of wet mopping system was too specific. One commenter stated that to include “a long handle, a mop head...” in the description of the wet mopping system is too prescriptive and favors a particular model of commercial product. EPA understands that the two bucket mopping system may not be appropriate for all floor types due to the quantity of water involved. However, the HUD Guidelines recommend and the Dust Study demonstrates that wet cleaning is best able to achieve desired results. This final rule allows for the use of a wet mopping system instead of the two bucket system for the cleaning of flooring. EPA has included a definition of a wet mopping system in order to allow the regulated community to use such a system in place of the traditional two-bucket mop method. EPA’s Electrostatic Cloth and Wet Cloth Field Study in Residential Housing study (“Disposable Cleaning Cloth Study”), discussed in more detail in Unit IV.E.2. of the 2006 Proposal, indicates that a wet mopping system is an effective method for cleaning up leaded dust (Ref. 37). EPA believes that allowing the use of a wet mopping system like those widely available in a variety of stores should alleviate concerns regarding the quantity of water used in the cleanup. In addition, EPA disagrees that the description of a wet mopping system favors a particular model of commercial product. Rather, it generally describes any number of wet mopping systems widely available in most stores. However, to alleviate concerns that a particular model of commercial product is preferred, EPA has added the phrase “or a method of equivalent efficacy” to the end of the definition of “wet mopping system.”

One commenter recommended that instead of referencing a two bucket method, EPA should consider simply stating that a method be used that keeps the wash water separate from the rinse water. EPA agrees and has revised the regulatory text to specify a method that keeps wash water separate from rinse water, giving as an example the two bucket method.

One commenter questioned the requirement to vacuum underneath a rug or carpet where feasible. The commenter suggested that EPA clarify that this does not include permanently affixed wall-to-wall carpeting. The commenter notes that it is highly unlikely that the renovation or remodeling activity conducted in a carpeted room would have created the dust embedded underneath both the layer of plastic sheeting and the installed carpeting. EPA agrees with this commenter. EPA did not intend to require vacuuming beneath permanently affixed carpets, i.e., wall to wall carpeting, but rather that removable rugs should be removed and the area beneath vacuumed. However, small, movable, area rugs should be removed from the work area prior to the renovation and the floor beneath would be cleaned as required under this final rule. Therefore, in response to this commenter, EPA has deleted the requirement to vacuum beneath rugs where feasible.

One commenter recommended four options for cleaning carpets: removing the carpet and pad, cleaning the underlying flooring, then replacing the carpet and pad; shampooing the carpet using a vacuum attachment that removes the suds; steam cleaning the carpet using a vacuum attachment that removes the moisture; or HEPA filtered vacuuming. This final rule seeks to minimize the introduction of lead-based paint hazards to carpeted floors by requiring the certified renovator to cover the floor of the work area with plastic sheeting, carefully clean up and remove the plastic sheeting following work, and thoroughly vacuum the carpet using a HEPA vacuum with a beater bar. In addition, the rule requires that floor surfaces under rugs that could not be removed from the work area are vacuumed with a HEPA vacuum. EPA believes this containment and cleanup protocol will minimize exposure to lead-based paint hazards created during renovation activities. EPA does not believe a renovation contractor should be responsible for removing and replacing carpet in a home when such a requirement was not within the scope of the renovation project. Also, in contrast to the effectiveness of using a HEPA on carpets, EPA does not have sufficient data on steam cleaning or shampooing to evaluate its effectiveness. Without data to demonstrate the effectiveness of shampooing or steam cleaning carpets EPA is not prepared to require these methods be used in lieu of vacuuming with a HEPA vacuum. EPA further notes that the HUD lead-safe Housing Rule only requires HEPA vacuuming, not steam cleaning or shampooing.

c. Vacuums equipped with HEPA filters. Given that the HUD Guidelines recommend the use of HEPA vacuums and the OSHA Lead in Construction standard requires that vacuums be equipped with

HEPA filters where vacuums are used, EPA proposed requiring the use of HEPA vacuums in its proposed work practices. Nonetheless, EPA requested comment on whether the rule should allow the use of vacuums other than vacuums equipped with HEPA filters given. Specifically, EPA requested comment on whether there are other vacuums that have the same efficiency at capturing the smaller lead particles as HEPA-equipped vacuums, along with any data that would support this performance equivalency and whether this performance specification is appropriate for leaded dust cleanup.

i. *Background.* HEPA filters were first developed by the U.S. Atomic Energy Commission during World War II to capture microscopic radioactive particles that existing filters could not remove. HEPA filters have the ability to capture particles of 0.3 microns with 99.97% efficiency. Particles both larger and smaller than 0.3 microns are easier to catch. Thus, HEPA filters capture those particles at 100%. Available information indicates that lead particles generated by renovation activities range in size from over 20 microns to 0.3 microns or less (Ref. 38).

OSHA recently completed a public review of their Lead in Construction standard (Ref. 39). OSHA concluded that the principal concerns regarding HEPA vacuums (i.e., cost and availability) have been significantly reduced since the standard was established in 1994. HEPA vacuum cleaners have an increased presence in the marketplace and their cost has decreased significantly. Therefore, OSHA continues to require the use of HEPA vacuums in work subject to the Lead in Construction Standard.

ii. *Final rule requirements.* Vacuums used as part of the work practices being finalized in this final rule must be HEPA vacuums, which are to be used and emptied in a manner that minimizes the reentry of lead into the workplace. The term “HEPA vacuum” is defined as a vacuum which has been designed with a HEPA filter as the last filtration stage. A HEPA filter is a filter that is capable of capturing particles of 0.3 microns with 99.97% efficiency. The vacuum cleaner must be designed so that all the air drawn into the machine is expelled through the filter with none of the air leaking past it.

iii. *Comments.* Many commenters supported the use of HEPA vacuums. Some of these commenters supported the requirement that they be used because they are also required by the OSHA Lead in Construction standard. One commenter noted that the price of HEPA vacuums had decreased and were no longer significantly more expensive than non-HEPA vacuums.

Another commenter cited the Dust Study, the NAHB Lead Safe Work Practices Survey, and several other studies as supporting the conclusion that lead-safe work practices and modified lead-safe work practices, along with a two-step or three-step cleaning process using a

HEPA-equipped vacuum and wet washing, greatly reduce dust lead levels and should be regarded as best management practices for renovation jobs. The commenter notes that the NAHB study found significant reductions in loading levels after cleanup using HEPA-equipped vacuum and then either wet washing or using a wet disposable cleaning cloth mop.

One commenter contended that HEPA vacuums with beater bars were not currently available on the market at the time comments were submitted. However, EPA has been able to identify commercial vacuum manufacturers as well as department store brands that currently offer HEPA vacuums with beater bar attachments.

Several commenters noted that vacuum cleaners other than HEPA vacuums were effective at removing lead dust. They cited several papers which they asserted support their conclusion, including *Comparison of Home Lead Dust Reduction Techniques on Hard Surfaces: The New Jersey Assessment of Cleaning Techniques Trial* (2002) by Rich, *et al* (Ref. 40), a study by the California Department of Health Services (Ref. 41) which the commenter contends concluded that some non-HEPA vacuums performed better than the HEPA units tested, *Comparison of Techniques to Reduce Residential Lead Dust on Carpet and Upholstery: The New Jersey Assessment of Cleaning Techniques Trial* (2002) by Yiin, *et al* (Ref. 42), and *Effectiveness of Clean up Techniques for Leaded Paint Dust* (1992) by the Canadian Mortgage and Housing Corporation (Ref. 43).

The commenter that cited the Rich, *et al* paper contended that the authors found no clear difference between the efficacy of HEPA and non-HEPA vacuums on hard surfaces (non-carpeted floors, windowsills, and window troughs), and found that non-HEPA vacuums appeared more efficient in removing particles on uncarpeted floors, which are the hard surfaces that may best reflect exposure to children. One commenter stated that given the research literature demonstrates that there is no performance difference in lead dust removal, EPA should allow cleanup with either a HEPA or non-HEPA vacuum. Another commenter contended that a vacuum cleaner retrofitted with a HEPA filter rather than a HEPA vacuum should be required to be used as part of the work practices.

EPA disagrees with the commenters who state that the literature does not demonstrate a difference between HEPA vacuums and non-HEPA vacuums. In the Yiin, *et al* study, the authors stated that for carpets, data from the “[Environmental and Occupational Health Sciences Institute] vacuum sampling method showed a significant reduction (50.6%, $p = 0.014$) in mean lead loading for cleaning using the HEPA vacuum cleaner but did not result in a significant difference (14.0% reduction) for cleaning using the non-HEPA vacuum cleaner.” They also note that when they used wipe sampling “the results indicated that neither of the cleaning methods yielded a significant

reduction in lead loading.” EPA believes the results from the wipe sampling method is less useful because as discussed in Unit III.E.8.iv. of this preamble, the Agency believes that wipe sampling on carpets is not a reliable indicator of the lead-based paint dust in the carpet. The authors report that in their study non-HEPA vacuums were more effective than HEPA vacuums on upholstery but note “[t]he reduced efficiency of the HEPA vacuum cleaner in cleaning upholstery [as compared to carpets] may be, at least partially, due to the lower pre-cleaning dust lead level and the smaller sample data set for the HEPA vacuum cleaner than for the non-HEPA vacuum cleaner.”

In the Rich, *et al* study, the authors noted that “On windowsills, the HEPA vacuum cleaner produced 22% (95% CI, 11-32%) larger reductions than the non-HEPA vacuum cleaner, and on the window troughs it produced 16% (95% CI, -4 to 33%) larger reductions than the non-HEPA vacuum cleaner.” Not only were the percent reductions greater, the post-cleaning geometric mean lead loadings for the experiments in which the HEPA vacuums were used was lower than the post-geometric mean lead loadings for the experiments in which the non-HEPA vacuums were used. On hard floors, the authors reported that the non-HEPA vacuum removed the largest quantities of lead-based paint dust. They note that this may be due in part to the fact that the initial loadings were higher where the non-HEPA vacuums were used (Pre-cleaning geometric mean lead loadings were 200 and 155 $\mu\text{g}/\text{ft}^2$ for the two types of experiments where non-HEPA vacuum were used) as compared to the lead loadings for the experiments in which the HEPA vacuum was used (Pre-cleaning geometric mean lead loading of 100 $\mu\text{g}/\text{ft}^2$). However, the post-cleaning geometric mean lead loading for the experiments in which the HEPA vacuum was used was lower than for either of the two types of experiments where non-HEPA vacuums were used. The post-cleaning geometric mean lead loading was lower for each set of experiments in which the HEPA vacuum was used. In considering these data, EPA believes that the data on the post-cleaning lead loadings are particularly important. In assessing the performance of cleaning methods, it is not only the percent reduction that is important but also the ability to clean down to very low levels. Several studies have demonstrated that reducing lead loadings from relatively high levels to about 100 ug/ft^2 is more readily accomplished than reductions below 100 ug/ft^2 and becomes progressively harder at lower levels (Ref. 44).

One commenter stated that EPA did not have sufficient evidence showing that HEPA vacuums are significantly better at removing lead dust than non-HEPA vacuums and cited a Canadian Mortgage and Housing Corporation study from 1992 (Ref. 43). That study was a laboratory study done in a dynamic chamber under controlled conditions and used simulated lead dust. Lead stearate, a compound not typically used in lead-based paint, was used to spike the construction dust used in the experiments. This study has various

limitations. It focused on how much of the quantity of leaded dust applied to a surface was present in the vacuum bag after vacuuming. There was no assessment of the size of the dust particles collected. Most importantly, the study did not measure the quantity of leaded dust that remained on the floor. Without this data, the efficacy of the non-HEPA vacuums cannot be assessed. In addition, the study is not very informative as to what will occur under real world conditions.

Two years later, the same group (Ref. 45) studied 20 test rooms where they produced lead-containing dust by power sanding walls of known lead levels. Four cleaning methods were used, of which only two produced acceptable results. The two cleaning methods that did not produce acceptable clean-ups were: (1) dry sweeping the floor with a corn broom followed by vacuuming with a utility vacuum; and (2) vacuuming the floor with a household vacuum cleaner followed by wet mopping with a commercial household cleaner. The other two methods that achieved clean-ups resulting in floors that passed dust clearance testing were: (3) vacuuming the floor with a utility vacuum followed by wet mopping with a 2% solution of a commercial lead-cleaning product, followed by a rinse with clean water; and (4) vacuuming with a HEPA vacuum, followed by wet mopping with trisodium phosphate, followed by a clean water rinse, followed by more vacuuming with a HEPA vacuum. The report concludes that “. . .Cleaning Methods 1 and 2 were inadequate to meet the cleanliness criteria. . .” Later it states “Cleaning Methods 3 and 4 did meet both the current and proposed HUD criteria.”

The same commenter also referred to a report submitted to HUD by the California Department of Health Services (Ref. 41). This study evaluated a range of vacuums. The efficacy of the non-HEPA vacuums varied, particularly in comparison with the HEPA vacuums. The authors of the report did not identify the attributes of the non-HEPA vacuums that were instrumental in determining their effectiveness. At best, vacuums that were effective at picking up and retaining lead-based paint dust could be classified as high performing although there were no criteria that could be discerned on what made a high performing vacuum. The report also states that HEPA models without floor tool brushes performed poorly. This may be the case. The HEPA vacuums used in EPA's Dust Study performed adequately and all of these vacuums were equipped with flip down brushes on the floor tool.

The California report contained another finding of interest. “Of special concern is the direct observation under the scanning electron microscope of lead dust particles dissolving on exposure to water to release large numbers of sub-micron lead particles. Although requiring further study, this effect suggests that vacuuming to remove most of the water soluble lead dust, followed by wet-washing would be the best cleaning strategy.” The cleaning protocol in this final rule follows this strategy by requiring, for all surfaces in and around the work area except

for walls, HEPA vacuuming, followed by wet wiping or wet mopping, followed by the cleaning verification protocol.

EPA has determined that the weight of the evidence provided by these studies demonstrate that the HEPA vacuums consistently removed significant quantities of lead-based paint dust and reduced lead loadings to lower levels than did other vacuums.

While there may be some vacuums cleaners that are as effective as HEPA vacuums, EPA has not been able to define quantitatively the specific attributes of those vacuums. That is, EPA is not able to identify what criteria should be used to identify vacuums that are equivalent to HEPA vacuums in performance. The authors of the studies discussed above do not state that the vacuums used are representative of all vacuums nor do they try to identify particular aspects of the non-HEPA vacuums. Thus, EPA does not believe that it can identify in this final rule what types of vacuums can be used as substitutes for HEPA-vacuums. EPA believes it would be ineffective to identify specific makes or models of vacuums (e.g., the ones used in the studies) in this final rule given how quickly manufacturers change models, nor would that take into account new manufacturers.

EPA also disagrees with the commenter that suggested that vacuums that are retrofitted with a HEPA filter should be considered sufficient for purposes of this rule. These vacuums are not necessarily properly sealed or designed so that the air flow goes exclusively through the HEPA filter. EPA agrees with the commenter who stated that HEPA vacuums are vacuums which have been designed for the integral use of HEPA filters, in which the contaminated air flows through the HEPA filter in accordance with the instructions of its manufacturer and for which the performance standard for the operation of the filter is defined. EPA also agrees with those commenters that contended that the rule should contain a more-specific definition of HEPA vacuum. Accordingly, this final rule defines "HEPA vacuum" as a vacuum which has been designed with a HEPA filter as the last filtration stage and includes a description of what the term HEPA means. The definition of "HEPA vacuum" also specifies that the vacuum cleaner must be designed so that all the air drawn into the machine is expelled through the filter with none of the air leaking past it.

Furthermore, EPA agrees that OSHA's requirement that HEPA vacuums should be an important consideration in determining whether HEPA vacuums should be required to be used as part of the work practices being finalized today. Because OSHA's standard covers practically all work subject to EPA's final Renovation, Repair, and Painting program regulations, and applies to all firms having an employee/employer relationship with few exceptions, there is no reason to create a separate standard for those firms not subject to the OSHA standard, particularly in light of the data on the efficacy of HEPA vacuums versus non-HEPA vacuums discussed above. Even if EPA were

able to define vacuums that were acceptable substitutes to HEPA vacuums, it is not clear that the benefits would outweigh the complications associated with creating an EPA standard that is different than that required by OSHA.

7. *Cleaning verification.* This final rule requires the certified renovator to use disposable cleaning cloths after cleaning both as a fine cleaning step and as verification that the containment and cleaning have sufficiently cleaned up the lead-paint dust created by the renovation activity. Cleaning verification's usefulness is based on the combination of its fine cleaning properties and the fact that it provides feed-back to the certified renovator on the effectiveness of the cleaning. Cleaning verification is an important component of the work practices set forth in this rule and contributes to the effectiveness of the combination of training, containment, cleaning and verification at minimizing exposure to lead-based paint hazards created during renovation, remodeling and painting activities.

a. *Background.* As described in greater detail in Unit IV.E.2. of the preamble to the 2006 Proposal (Ref. 3), EPA began looking for an alternative to dust clearance sampling that would be quick, inexpensive, reliable, and easy to perform. EPA believed that a verification method was needed because studies have consistently shown that interior visual clearance resulted in a high percentage of false negatives, that is falsely indicating that lead loadings were below the standards used. This occurred even when using a clearance standard of 100 $\mu\text{g}/\text{ft}^2$.

i. *Disposable Cleaning Cloth Study.* The Disposable Cleaning Cloth Study used commercially available disposable cleaning cloths to determine whether variations of a "white glove" test could serve as an effective alternative (Ref. 37). White disposable wet and dry cleaning cloths were used to wipe windowsills and wipe floors, then they were examined to determine whether dust was visible on the cloth. This determination was made by visually comparing the cloth to a photographic standard that EPA developed to correlate to a level of contamination that is at or below the dust-lead hazard standard in 40 CFR 745.65(b). Cloths that matched or were lighter than the photographic standard were considered to have achieved "white glove." This series of studies found that on uncarpeted floors, 91.5% of the surfaces that achieved "white glove" using only dry cloths were confirmed by dust wipe sampling to be below the dust lead hazard standard for floors, while 97.3% of the floors that achieved "white glove" using only wet cloths were also below the hazard standard. In addition, 10 of the 11 floors where "white glove" was not achieved using dry cloths, and 20 of the 21 floors where "white glove" was not achieved using wet cloths, were nonetheless below the dust lead hazard standard. There were very few instances where "white glove" was achieved but the dust lead level was above the dust lead hazard standard. Thus, the study showed that for floors, the white glove test

results were biased towards false positives. Windowsills were also tested. For the dry cloth protocol, 96.4% of the sills that achieved “white glove” were also confirmed by dust wipe sampling to be below the dust lead hazard standard for windowsills, and the one sill that did not achieve “white glove” was also below the standard. For the wet cloth protocol, all of the sills that achieved “white glove” were also below the dust lead hazard standard, as were the four sills that did not reach “white glove.”

Based on the results of the Disposable Cleaning Cloth Study, the 2006 Proposal included for interior renovations, as part of the work practices, a post-renovation cleaning verification process that would follow the visual inspection and cleaning. Cleaning verification would consist of wiping the interior windowsills and uncarpeted floors with wet disposable cleaning cloths and, if necessary dry disposable cleaning cloths, and comparing each to a cleaning verification card developed and distributed by EPA.

ii. *The Dust Study.* The Dust Study (Ref. 17), which is described elsewhere in this preamble, assessed the proposed work practices. As one component of the proposed work practices, the cleaning verification was evaluated in the Dust Study. It should be noted that the Dust Study was not designed specifically to evaluate the cleaning verification in isolation of the rest of the work practices. Unlike the earlier Disposable Cleaning Cloth Study that was intended to test the effectiveness of the use of the “white glove” test in isolation, the Dust Study was meant to evaluate the effectiveness of the proposed work practices, including cleaning verification. Unlike the earlier Disposable Cleaning Cloth Study, the Dust Study involved actual renovations performed by local renovation contractors who received instruction in how to perform cleaning verification and then were left alone to determine whether cleaning cloths matched or were lighter than the cleaning verification card. In order to maximize the information collected about cleaning verification in the Dust Study, cleaning verification was conducted after each experiment, not just those experiments that were being conducted in accordance with the proposed rule requirements for containment and cleaning.

One of the Dust Study conclusions was that cleaning verification resulted in decreases in lead levels, but was not always accurate in identifying the presence of levels above EPA dust lead hazard standards for floors and sills. This refers to the experiments involving power planing and high temperature heat guns. An examination of the cleaning verification data in the study shows that, if power planing and high temperature heat gun experiments are excluded, the values for post-renovation cleaning verification when the proposed rule work practices were used were at or below the regulatory hazard standard for floors, often significantly below the regulatory hazard standard. These results were similar for windowsills. Excluding power planing and high temperature heat gun experiments, all of the post-renovation

cleaning verification windowsill sample averages for experiments conducted in accordance with the proposed rule requirements were below the regulatory dust lead hazard standard for windowsills. In addition, 26 of the 30 other experiments (using only some elements of the proposed containment and cleaning requirements) not involving power planing or high temperature heat guns had post-renovation cleaning verification sill sample averages well below the hazard standards.

b. *Cleaning verification as an alternative to clearance testing.* In determining whether cleaning verification could be seen as a qualitative alternative to clearance testing, EPA considered both the Disposable Cleaning Cloth Study and the Dust Study. Even though the Disposable Cleaning Cloth Study showed that the cleaning verification cloths that reached “white glove” were approximately 91% to 97% likely to be below the regulatory hazard standard, EPA believes the greater variability seen in the Dust Study, particularly in the experiments where the complete suite of proposed work practices were not used does not support the characterization of cleaning verification as a direct substitute for clearance testing. Cleaning verification, when used apart from the other work practices, is not as reliable a test for determining whether the hazard standard has been achieved as clearance testing. However, the Dust Study supports the validity of cleaning verification as an effective component of the work practices. The cleaning and feedback aspects of cleaning verification are important to its contribution to the effectiveness of the work practices.

c. *Final rule requirements.* Based on a review of the Dust Study and the Disposable Cleaning Cloth Study, EPA concluded that if the practices prohibited in this final rule are avoided and the required work practices are followed, then cleaning verification is an effective component of the work practices. EPA believes that the suite of work practices as a whole are effective at addressing the lead-paint dust that is generated during renovation, repair, and painting preparation activities. Therefore, the final rule does not require dust clearance sampling after any renovations, nor does it allow the signs delineating the work area to be removed based solely on the results of a visual inspection. The final rule does require a certified renovator to perform a visual inspection to determine whether dust, debris, or residue is still present in the work area, and, if these conditions exist, they must be eliminated by re-cleaning and another visual inspection must be performed. In addition, the rule requires that after an interior work area passes the visual inspection, the cleaning of each windowsill and uncarpeted floor within the work area must be verified, as explained below. After an exterior work area passes the visual inspection, the renovation has been properly completed. In response to one commenter who was concerned about the dust that could collect on exterior windowsills during exterior projects, the final rule clarifies that the visual inspection must confirm that no dust, debris or residue remains

on surfaces in and below the work area, including windowsills and the ground.

For interior renovations, after the work area has been cleaned and has passed a visual inspection, a certified renovator must wipe each interior windowsill in the work area with a wet disposable cleaning cloth and compare the cloth to a cleaning verification card developed by EPA. If the cloth matches or is lighter than the image on the card, that windowsill has passed the post-renovation cleaning verification. If the cloth is darker than the image on the card, that windowsill must be re-cleaned in accordance with § 745.85(a)(5)(ii)(B)-(C) and the certified renovator must wipe that windowsill with a new wet cloth, or the same one folded so that an unused surface is exposed, and compare it to the cleaning verification card. If the cloth matches or is lighter than the card, that windowsill has passed. If not, the certified renovator must then wait for one hour after the surface was wiped with the second wet cleaning verification cloth or until the surface has dried, whichever is longer. Then, the certified renovator must wipe the windowsill with a dry disposable cleaning cloth. Based on the Dust Study, EPA concluded that this process need not be repeated after the first dry cloth. At that point, that windowsill has passed the post-renovation cleaning verification process. Each windowsill in the work area must pass the post-renovation cleaning verification process.

The cleaning verification protocol in the final rule is similar to what was in 2006 Proposal. By not requiring the surface to be re-cleaned after the second wet wipe and by ending the cleaning verification process after one dry cloth, this final rule is different from the Proposal. The 2006 Proposal required that the dry cloths be used until one passed verification (i.e., reached “white glove”). EPA’s final rule does not require more than one dry cloth because only 3 experiments out of the 60 performed in the Dust Study failed the second wet cloth. None of these 3 experiments were performed in accordance with the requirements of this final rule; all experiments performed in accordance with the requirements of this final rule passed after either the first or second wet cloth. Based on the Dust Study, it is unlikely that dust containing lead will remain in excess of the hazard standard following two wet and one dry wipes; however EPA is concerned about the possibility of requiring potentially indefinite cleaning by renovation contractors, with the potential of making them responsible for cleaning up pre-existing dirt or grime, whether lead-contaminated or not.

After the windowsills in the work area have passed the post-renovation cleaning verification, a certified renovator must proceed with the cleaning verification process for the floors and countertops in the work area. A certified renovator must wipe no more than 40 ft² of floor or countertop area at a time with a wet disposable cleaning cloth. For floors, the renovator must use an application device consisting of a long handle and a head to which a wet disposable cleaning cloth is attached. If the floor and countertop surfaces in the work area exceed

40 ft², the certified renovator must divide the surfaces into sections, each section being no more than 40 ft², and perform the post-renovation cleaning verification on each section separately. If the wet cloth used to wipe a particular section of surface matches or is lighter than the image on the cleaning verification card, that section has passed the post-renovation cleaning verification. If, however, on the first wiping of a section of the surface, the wet cloth does not match and is darker than the image on the cleaning verification card, the surface of that section must be re-cleaned in accordance with § 745.85(a)(5)(ii)(B) and (C). After re-cleaning, the certified renovator must wipe that section of the surface again using a new wet disposable cleaning cloth. If the second wet cloth matches or is lighter than the image on the cleaning verification card, that section of the floor has passed. If the second wet cloth does not match and is darker than the image on the verification card, the certified renovator must wait for 1 hour or until the surface has dried, whichever is longer. Then, the certified renovator must wipe each of those 40 ft² sections of the floor or countertop surfaces that did not achieve post-renovation cleaning verification using the wet cloths with a dry disposable cleaning cloth. On floors, this wiping must also be performed using an application device with a long handle and a head to which the dry cloth is attached. At that point, the floors and countertops have passed the post-renovation cleaning verification process and the warning signs may be removed.

In finalizing the work practices in this final rule, EPA has taken into consideration safety, reliability and effectiveness. EPA has concluded that these work practices, including cleaning verification, are an effective and reliable method for minimizing exposure to lead-based paint hazards created by the renovation, both during and after the renovation.

e. *Comments.* EPA received many comments on cleaning verification. The majority of the comments supported the use of dust wipe clearance testing and did not consider cleaning verification as a suitable substitute. Some of these commenters supported the use of dust wipe clearance testing for purposes of clearance. Some commenters did not support either dust wipe clearance testing or cleaning verification; they contended that visual inspection alone was sufficient and that dust clearance testing is too costly. Others questioned whether cleaning verification had been demonstrated to be valid, reliable, and effective in establishing that the work area had been adequately cleaned or that the clearance standards were met. Some contended that the cleaning verification method showed promise, but should be subjected to additional testing, including field trials, to demonstrate its effectiveness when used by certified renovators. A minority of commenters supported the use of cleaning verification. Some supported its use rather than dust wipe-clearance testing and clearance, particularly given that renovations are not intended to remove lead-based paint. Some

supported cleaning verification because it is faster, easier to implement, and less expensive than clearance testing.

i. *Cleaning verification is not a substitute for clearance testing.*

Many commenters contended that cleaning verification is not a substitute technology for dust-wipe clearance testing and should not be used in this manner. EPA agrees with the commenters. As discussed in Unit III.E.8.b., based on a careful consideration of the Disposable Cleaning Cloth Study and the Dust Study, EPA has concluded that, in itself, cleaning verification should not be used as a substitute for dust wipe clearance testing.

ii. *Dust clearance testing and clearance.* Many commenters asserted that the rule should require dust clearance testing instead of the cleaning verification. Some further contended that dust clearance testing is the only proven method for verifying lead dust levels. Others supported the use of dust wipe clearance testing for purposes of clearance for the renovation. One commenter noted that even when dust clearance testing is performed it is not uncommon for clearance to be conducted up to three times on a home to make sure that lead levels are sufficiently low. Some commenters suggested that cleaning verification be used as a screen before dust clearance testing. Other commenters contended that dust clearance testing should not be required because it is expensive and time consuming and is an obstacle to completing the renovation job. Other commenters contended that dust clearance testing has been done in some jurisdictions quickly and relatively inexpensively. A few commenters contended that EPA should not require dust clearance testing because there is a difference between abatement, which is intended to eliminate lead-based paint hazards, and renovations in which the focus should be to not create any new lead-based paint hazards. Some commenters asserted that dust clearance testing should not be required because this would result in the renovator being responsible for existing lead-based paint hazards. One commenter used the example of a window replacement project to illustrate this point. The commenter argued that, where the floor in the work area is in poor condition but outside the scope of the renovation contract, the window replacement contractor should not be responsible for making sure the floor passes a clearance standard, which may not be possible without modifying the floor.

EPA disagrees that dust clearance testing and clearance should be components of the renovation activities subject to this final rule. Dust clearance testing is used in abatement to determine whether lead-based paint hazards have been eliminated. This test is part of a specific process that involves a specialized work force (e.g., inspector, risk-assessor), typically removal of residents, and modifications to the housing in some instances to eliminate lead-based hazards (e.g., removing carpet or refinishing or sealing uncarpeted floors). Dust clearance testing is needed to determine if lead-based paint hazards have been eliminated and residents can re-occupy a house and not be

exposed to lead-based paint hazards. As noted by a commenter, a home may require clearance testing be conducted up to three times before the home is determined to be free of lead-based paint hazards and it may require that floors be refinished or that carpets be replaced.

The Disposal Cleaning Cloth Study showed that wet wipes can pick up accumulated grime from floors. Applying this to the renovation context, if EPA were to require clearance, renovators might be held responsible for cleaning up pre-existing lead dust hazards that had accumulated in the grime on the floor. Based on the Dust Study, EPA has determined that all of the leaded dust generated by the renovation will have been cleaned up by two wet wipes followed by one dry wipe, where necessary. EPA is concerned about the possibility of requiring potentially indefinite cleaning by renovation contractors, with the potential of making them responsible for cleaning up pre-existing dirt or grime, whether lead-contaminated or not. Even assuming EPA has authority to require replacement of carpets and floors under some circumstances as part of a renovation project, EPA does not think as a policy matter that such an approach in which pre-existing hazards must be eliminated is appropriate. It could fundamentally change the scope of a renovation job. The time and cost of conducting clearance testing and achieving clearance is an acceptable part of the time and cost of conducting the abatement given the goal of an abatement, the range of activities that are inherent in an abatement, and the activities that are required to be conducted to achieve clearance. Given the effectiveness of the work practices being finalized in this rulemaking, including the role of cleaning verification in minimizing exposure to lead-based paint dust generated during renovations, dust clearance testing does not provide the added value to balance the time and effort and the cost to home and building owners associated with requiring this additional step to the work practices.

As discussed in Unit II.A.6.b., there are many differences between renovations and abatements. Renovations are different from abatements in intent, implementation, type of workforce, workforce makeup, funding, and goal. Renovations are focused not on eliminating lead-based paint hazards, but rather on making repairs or improvements to a building. The vast majority of abatements are either done with funding from HUD and/or a State or local government. In addition, residents are not typically present in a residence during an abatement while they are typically present in a residence during a renovation. Thus, the purpose of dust wipe clearance testing and clearance would necessarily be different if it were used in a renovation than in an abatement. For abatements, clearance testing and clearance are used to minimize potential exposure by eliminating lead-based paint hazards after completion of the job. Clearance acts as the means to ensure that minimization and signal the end of the job. For renovations, given the presence of residents, the concern is for potential exposure both during and after the job. Dust clearance testing and clearance would only

address the second part of the exposure equation. Thus, dust clearance testing conducted after renovation activities have been completed would not provide the equivalent determination of potential exposure that it does for abatement. EPA has considered this difference as one factor in its determination that given the effectiveness of the work practices being finalized in this rulemaking, including the role of cleaning verification in minimizing exposure to lead-based paint dust generated during renovations, dust clearance testing does not provide the added value to balance the time and effort and the cost to home and building owners associated with requiring this additional step to the work practices.

Although renovators should be required to address lead-based paint dust generated by renovation activities, the Agency is not requiring renovators to take the actions required under the abatement rules to achieve clearance for lead-based paint dust not associated with the renovation and to address housing conditions not associated with the renovation.

EPA agrees that having dust wipe samples collected by a qualified person and analyzed by a qualified laboratory is an effective way to determine the quantity of lead in dust remaining after a renovation activity, but it would not necessarily show that the dust was due to the specific renovation activity. EPA also notes that in addition to providing a numerical value, dust clearance testing costs more than cleaning verification and takes longer to produce results. Results can take from 24 to 48 hours or longer and cleaning, sampling and analysis may have to be repeated depending upon the initial results. During this period, the warning signs delineating the work area would need to be maintained to protect occupants and others from the risk of exposure to lead-based paint hazards created by the renovation. Thus, EPA believes that dust clearance sampling is a poor fit for renovation work for a variety of reasons, including the greater expense associated with clearance testing, the time necessary to obtain the results of the testing and the consequent delay in the completion of the job, and the potential to expand the scope of the renovation.

EPA believes that dust clearance testing and clearance are not necessary given that the Dust Study demonstrates that cleaning verification, as an effective component of the work practices, minimizes exposure to lead-based paint hazards created by the renovation, both during and after the renovation. The cleaning and feedback aspects of cleaning verification are important to its contribution to the effectiveness of the work practices. EPA notes that unlike dust wipe clearance testing in which a small part of the work area would be tested, cleaning verification is conducted over the whole work area. Each repetition of the cleaning verification protocol further cleans the surface.

The work practices, including cleaning verification, required by this final rule are expected to minimize exposure to any newly created lead-based paint hazards created by a renovation by removing newly deposited dust, while requiring cleanup of pre-existing hazards only incidentally, to the extent such cleanup is unavoidable to address the newly created hazards. The Dust Study demonstrates that the cleaning verification protocol, used in conjunction with the other work practices in this final rule, is effective and reliable in achieving this result.

While the requirements of this rule will, in some cases, have the ancillary benefit of removing some pre-existing dust-lead hazards, it strikes the proper balance of addressing the lead-based paint hazards create during the renovation but at the same time not requiring renovators to remediate or eliminate hazards that are beyond the scope of the work they were hired to do.

iii. *Visual inspection in lieu of cleaning verification.* Some commenters urged EPA to require only visual inspection of the work area after the cleaning following a renovation. They contend that cleaning verification is not needed. Some commenters argued that thorough cleaning in combination with a requirement that no visible dust or debris remain is adequate to address the lead dust created by the renovation activity. Most of these commenters also noted that because renovation and abatement are different that it would be inappropriate for EPA to impose additional requirements on renovation firms beyond visual inspection. Some commenters contended that the lead dust from a renovation is usually in the form of debris such as chips and splinters that can be seen with the naked eye, and the presence of this debris is an indicator to workers that the job site requires additional cleaning until no visible debris remains.

One commenter contended that cleaning after the renovation activity until the worksite passed a visual inspection was the most important determinant of whether a job would pass a dust clearance test. In support of this contention, the commenter cited the Reissman study (Ref. 22). The commenter contended that the study demonstrates that when there was no visible dust and debris present after completion of renovation or remodeling activity, there was no added risk of a child having an elevated blood lead level as compared to the risk for children living in homes where there was no reported renovation or remodeling work.

Two commenters offered an analysis of two sets of data collected by an environmental testing firm. One dataset consists of post-renovation dust samples collected in Maryland apartment units; the other consists of dust samples collected for risk assessment purposes in 41 states. No information on renovation activity is provided for the second dataset. The commenters argue that because 96.7% of the Maryland post-renovation samples and 96.1% of the other samples were below the applicable hazard standard for the surface (floor or

windowsill) tested, this suggests that visual inspection in those cases was sufficient to ensure that no dust-lead hazard existed.

One commenter cited the Dust Study (Ref. 17), the NAHB Lead Safe Work Practices Survey (Ref. 19), and several other studies as supporting the conclusion that lead-safe work practices and modified lead-safe work practices, along with a two-step or three-step cleaning process using a HEPA-equipped vacuum and wet washing, greatly reduce dust lead levels and should be regarded as best management practices for renovation jobs. The commenter notes that the NAHB study found significant reductions in loading levels after cleanup using HEPA-equipped vacuum and then either wet washing or using a wet mopping system. The commenter argues that if the work area is cleaned using these practices, it is appropriate to adopt a visual clearance standard allowing no visible dust or debris in the work area at the conclusion of the job.

Other commenters contended that visual inspection following cleaning after a renovation is not a reliable method for determining whether a lead-based paint hazard remains after cleaning. Some commenters cited a study conducted by the National Center for Healthy Housing (NCHH) showing that 67% of the visual inspections that initially passed failed when checked more carefully and 54% that eventually passed a visual inspection were found to be above the hazard standard. However, one commenter contended this was a poorly conducted study. Another commenter referred to the study “An Evaluation of the Efficacy of the Lead Hazard Reduction Treatments Prescribed in Maryland Environmental Article 6-8” conducted by NCHH for the Baltimore City Health Department in which 53% of housing identified by visual inspection as being below the hazard standard was actually above the hazard standard. Another commenter argued that NIOSH research indicates that significant lead contamination may remain on surfaces that appear clean.

During inter-Agency review, one commenter pointed to 2007 studies from Maryland and Rochester, New York that they contend show trained workers and visual inspection for dust and debris can achieve 85-90% compliance with the hazard standards following renovations in previously occupied housing. Given the lateness of the submission, EPA did not review this information. However, EPA notes that in a cover letter, the commenter states that the 2007 Maryland Study was conducted by workers that had taken a 2-day training course, which is more training than required by this rule. Even if the studies do demonstrate this effectiveness by highly trained workers, EPA does not believe that a 85-90% effectiveness is sufficiently protective for residents.

EPA disagrees with those commenters that contended that a visual inspection following cleaning after a renovation is sufficient to ensure the lead-based paint dust generated by a renovation has been

sufficiently cleaned-up. The weight-of-the-evidence clearly demonstrates that visual inspection following cleaning after a renovation is insufficient at detecting dust-lead hazards, even at levels significantly above the regulatory hazard standards. Further, EPA disagrees with the implication that easily visible paint chips and splinters are necessarily the primary materials generated during a renovation. EPA studies, including the Dust Study, show that renovation activities generate dust as well as chips and splinters. Finally, EPA disagrees with those commenters who requested the work practices in this final rule not include any verification beyond visual inspection. In the Dust Study, there were 10 renovations performed in accordance with the 2006 proposed work practices that did not involve practices prohibited by this final rule. Of those 10 renovations, 5 needed the additional cleaning verification step in order to achieve EPA's regulatory dust-lead hazard standards for floors. (EPA notes that the Dust Study Protocol did not explicitly specify that all dust and debris be eliminated prior to the cleaning verification step, only that visible debris be removed. However, the contractor running the study for EPA reported that, in practice, the renovators participating in the study eliminated all visible dust and debris as part of their typical cleaning regimen. Thus, the study protocol was slightly different from the rule requirements, which state that the renovation firm must remove all dust and debris and conduct a visual inspection before beginning the cleaning verification procedure.)

EPA does not believe that the Reissman, *et al.* study is supportive of the contention that visual inspection of the work area is sufficient because it did not evaluate the effectiveness of a visual inspection requirement. The study did not measure dust-lead levels, which are the basis for this rule. Instead, it characterized the relationships between elevated blood lead levels and renovation dust and debris that spread throughout the housing. EPA notes that Reissman, *et al.* concluded that there was a correlation between renovation activities and elevated blood lead levels.

EPA concluded that the dataset referenced by one commenter that consists of dust samples collected for risk assessment purposes in 41 states is not informative because there was no information on renovation activity collected with these dust samples. With respect to the Maryland renovation study, 96.7% is an overstatement. The author who conducted the analysis stated that:

[W]hen the maximum test values are examined rather than the mean, 9.8% of the MD sample and 12.5% of the national sample of properties with LBP surpassed at least one of the hazard thresholds of 40 $\mu\text{g}/\text{sf}$ for floors and 250 $\mu\text{g}/\text{sf}$ for sills. As illustrated in Exhibit 1, a fairly sizable percentage of the lead tests exceed the clearance thresholds. The failure rates are about 20 percent lower for Maryland than for the national LBP sample. However, even for Maryland, nearly one in ten apartments would fail the hazard test.

Thus, even if these were the only data available, it would not support the conclusion that visual clearance is effective.

After reviewing the NAHB Lead Safe Work Practices Survey, EPA concluded that it does not support the contention that visual inspection is sufficient to detect whether lead-based paint dust remains. While EPA agrees that use of a HEPA-vacuum and wet-washing are effective at cleaning lead-based paint dust, this does not support the case for relying on visual inspection without subsequent cleaning verification. In the NAHB study, the levels of lead-based paint dust that remained after the renovation activities were sometimes higher and sometimes lower than at the start of the renovation, but they were always at relatively high levels after the renovation--as high as 11,400 ug/ft².

In addition, the two studies conducted by the National Center for Healthy Housing as noted by commenters demonstrate that visual inspection was not effective at determining the presence of dust-lead hazards. The study "Evaluation of the HUD lead-Based Paint Hazard Control Grant Program" study conducted by NCHH corroborates these findings.

iv. Carpets and other horizontal surfaces within the work area.

Some commenters were concerned that cleaning verification is not intended for use on carpeted floors. They were not confident that thorough cleaning was adequate to address potential lead hazards that might remain in carpet after the renovation. One commenter pointed to studies showing a significant correlation between dust lead in carpets and children's blood lead. As cleaning verification is not required for carpet, commenters criticized the lack of a required method for determining that lead hazards in carpet had been eliminated. Commenters suggested EPA require clearance testing for carpeted rooms in the work area, which some argued has been demonstrated to be effective, or rely on the HUD protocol, which they asserted is widely accepted and used.

As discussed in detail in Unit IV.E. of the preamble to the 2006 Proposal, EPA did not design cleaning verification for use on carpeted floors. This was based on EPA's concerns about the validity of dust wipe sampling on carpeted floors. EPA noted that the decision to apply the clearance standard promulgated in the TSCA section 403 rulemaking to carpeted floors ultimately had little consequence, given the context in which clearance standards are used--to ensure that lead-based paint hazards have been eliminated. Typically, during an abatement, carpets that are in poor condition or are known to be highly contaminated are removed and disposed. EPA further notes that the HUD Lead-safe Housing Rule only requires HEPA vacuuming, not steam cleaning or shampooing.

While an abatement might require the removal of a lead-contaminated carpet, EPA has concluded that it is not appropriate to

require carpet removal following a renovation. Even assuming EPA has authority to require removal of carpet following a renovation, this could significantly expand the cost of a renovation, and fundamentally expand the scope of the renovation activity contracted for by the homeowner or building owner by requiring removal of carpets as a result of pre-existing lead contamination.

Dust Study data on containment and information on the effectiveness of HEPA vacuums show that the use of containment and post-renovation cleaning with HEPA vacuums to remove the lead-based paint dust potentially deposited on the carpets during the renovation would reliably and effectively address lead-based paint dust generated during a renovation. Thus, rather than rely upon a dust clearance sample that may not be accurate and may require the replacement of the carpet for renovation projects in which a carpet is present, EPA is finalizing the work practices which require containment and the use of a HEPA vacuum equipped with a beater bar for cleaning.

In the absence of a practical, effective way of determining how much lead dust has been added to a carpet and whether it has been fully removed, EPA is adopting a technology-based approach for carpets that differs from the approach used for hard-surfaced floors, by requiring use of a HEPA vacuum with a beater bar. EPA is not aware of, and commenters have not identified, a practicable approach similar to the one EPA has adopted for floors as a basis to evaluate the results of the application of work practice standards to carpets. In the absence of such an approach, EPA believes the approach adopted today is the most effective, reliable approach available for minimizing potential lead-based paint hazards in carpets created by renovations.

One commenter suggested that cleaning verification be required on other horizontal surfaces within the work area, in addition to windowsills and uncarpeted floors. EPA agrees with this commenter because the Dust Study demonstrated that, in nearly all cases, the cleaning verification step resulted in lower dust lead levels and, in most cases, the verification step was needed in order to achieve cleanup of all of the leaded dust deposited on the floors by the renovation. EPA is also concerned about the possible contamination of surfaces that are used to prepare, serve, and consume meals. EPA expects that movable surfaces, such as tables and desks, will be moved from the work area before work begins. Therefore, EPA has modified the rule to require cleaning verification on all countertops in the work area.

v. *Reliability of cleaning verification.* EPA received comments prior to the 2007 request for comments on the proposed work practices in light of the Dust Study. Those pre-Dust Study comments are summarized here. Commenters questioned whether cleaning verification had been demonstrated to be valid, reliable, effective, or efficient in establishing that the work area had been adequately cleaned or that the clearance standards were met. Some commenters contended

that the cleaning verification method showed promise, but should be subjected to additional testing, including field trials, to demonstrate its effectiveness when used by certified renovators. Commenters on the 2006 Proposal observed that the cleaning verification protocol was supported by a single study that was conducted under conditions unlike those presented by the typical renovation. Specifically, a commenter noted that most of the housing units studied had undergone some form of abatement that would likely have reduced dust levels and the study used professional inspectors or other highly trained individuals to collect the samples according to specified protocols. The commenter was concerned that a renovator with no experience with sample collection and little training could replicate the work of the professionals used in the study. The commenter pointed out that the study avoided testing the procedure on rough surfaces, a condition that will frequently occur in real world applications, and used a different set of wipe protocols than actually utilized by the EPA in the 2006 Proposal. Another commenter on the 2006 Proposal noted that cleaning verification had never been employed in a real-world practical setting. In addition, some of these commenters contended that the cleaning verification protocol was too complicated or too confusing to follow.

A number of commenters who provided comments in response to EPA's request for comments on the proposed work practices in light of the Dust Study quoted the sentence in the conclusion section of EPA's Dust Study that states that the cleaning verification protocol was not always accurate in identifying the presence of levels above EPA standards for floors and sills. Some of these commenters also noted the Dust Study report's discussion of factors that affected the effectiveness of cleaning verification, such as floor condition, contractor performance, job type, and dust particle characteristics. One commenter observed that while all interior experiments resulted in final passed cleaning cloths for all floor zones and for all windowsills, nearly half of the experiments in the study ended with average work room floor lead levels above EPA's dust lead hazard standard for floors of $40 \mu\text{g}/\text{ft}^2$. The Clean Air Scientific Advisory Committee, while not asked to comment on the efficacy of the cleaning verification, contended that in the Dust Study cleaning verification did not provide sufficiently reliable results, leading to an inaccurate assessment of cleaning efficiency.

EPA disagrees with these commenters. The Dust Study did provide a real-world practical setting in which to assess the use of cleaning verification. Local renovation contractors performed actual renovations for each experiment in the study. The contractors performed cleaning verification on floors of wood, vinyl, or tile, in good, fair, or poor condition. The Dust Study used the protocols that were consistent with those in the 2006 Proposal. While the Dust Study was not designed specifically to assess cleaning verification, it did assess the effectiveness of cleaning verification both when it was used as part of the proposed

rule work practices and as a separate step after the other experiments which did not follow all the proposed work practices. Each experiment included a cleaning verification step. The contractors were instructed in how to perform cleaning verification. They independently determined whether particular cloths matched or were lighter than the cleaning verification card. In most renovations not involving the practices that EPA is prohibiting in this rule, i.e., power planing (power sanding) and high temperature heat guns, cleaning verification in combination with the other work practices were effective at reducing dust lead levels on surfaces to or below the dust lead hazard standards, regardless of the condition of the floor. Cleaning verification, as well as the other components of the work practices being finalized today were not effective when high dust generation practices such as power planing (including power sanding) and high temperature heat guns were used. These practices, as well as torching, are being prohibited in this rulemaking. Thus, EPA, in its determination on the effectiveness of cleaning verification, is focusing on the results of the experiments in the Dust Study that did not involve these prohibited practices.

Of the 10 experiments in which the proposed rule practices were used and in which the practices being prohibited in this final rule were not used, all final lead-based paint dust levels were at or below the regulatory hazard standard (taking into account the accepted level of uncertainty, i.e., within plus or minus 20%, which is the performance criteria for the National Lead Laboratory Accreditation Program). In fact, four experiments resulted in levels that were less than 10 $\mu\text{g}/\text{ft}^2$, three resulted in levels less than 30 $\mu\text{g}/\text{ft}^2$, and three resulted in levels that were approximately 40 $\mu\text{g}/\text{ft}^2$ (all were well within the level of uncertainty for this value). In four of the experiments, at least one floor area failed verification on the first wet disposable cleaning cloth, all passed on the second wet cloth. In one of the experiments, a windowsill failed the first wet cloth, but passed the second. These results were seen on floors in a variety of conditions, including good, fair and poor conditions. As a general case, in the other experiments that did not follow all the proposed work practices, the use of cleaning verification after cleaning (both baseline cleaning and cleaning following the proposed work practices) reduced, often significantly, the amount of lead dust remaining.

EPA agrees with commenters that cleaning verification should not be used for clearance. However, while cleaning verification is not clearance testing, as described above the use of cleaning verification consistently resulted in levels of lead-based paint dust at or below the hazard standard. Also, the use of cleaning verification consistently resulted in lower levels of lead-based paint dust than remained after all types of cleaning studied when only followed by visual inspection. There is sufficient consistency in the data to support the use of cleaning verification as an effective component of the work practices being finalized today.

In response to the comment that the Disposable Cleaning Cloth Study used professional inspectors or other highly trained individuals following specified protocols, EPA intends to include cleaning verification in its training course for renovators and will use the results of the Dust Study and the Agency's observations on the experience of the contractors in the study in its development of this course.

vi. *Subjectivity of cleaning verification.* Many commenters objected to the "white glove" standard as inherently subjective, and doubted whether it would be protective. The commenters were concerned that the effectiveness of cleaning verification relies upon a renovation worker's understanding and application of the protocol, ability to define the floor sampling area or areas, and use of the cleaning verification card to determine whether a surface has been adequately cleaned. One commenter contended that, based on its experience as a sub-contractor to EPA on the Disposable Cleaning Cloth Study, making the visual pass/fail determination can be quite subjective and open to interpretation. The commenter believes that it may be unrealistic to expect that renovation workers will consistently make the proper decision using the proposed verification card. Some commenters speculated that the renovator's accuracy in comparing the cleaning cloth to the verification card could depend on factors such as the renovator's visual acuity, the lighting in the room, or simply differences in judgment among renovators. Another commenter thought that the lack of corrections for surface conditions, the experience of the person conducting the visual assessment, or pre-existing conditions might bias the results of testing.

EPA agrees that visual comparison of a cleaning cloth to a cleaning verification card has an element of subjectivity because the visual comparison of cloth to card requires some exercise of judgment on the part of the person doing the comparing. However, this does not necessarily mean that the comparison is suspect. As previously stated, the Dust Study represents a real-world test of the ability of renovators to learn how to do cleaning verification and to apply it in the field. Although one participant in the Dust Study expressed concern about the subjectivity of the test, the fact remains that cleaning verification was successfully performed by the renovation contractors in all of the experiments involving the work practices being finalized in this final rule (excluding those involving power planing (power sanding) and high temperature heat guns) and was predictive of whether renovators had cleaned-up the lead-based paint hazards created during the renovation activity to the dust-lead standard, particularly when the proposed work practices were used. These cleaning verifications were conducted by various persons in various light conditions and on various surface conditions. Further, EPA notes that cleaning verification is not simply qualitative clearance. Unlike the sampling for dust clearance testing, the cleaning verification involves a cleaning component. The act of doing the cleaning verification has been shown to lower, often significantly, the dust lead levels. Finally, in the development of its

training course for contractors, EPA plans to use its data on the contractors' use of cleaning verification in the Dust Study, including their use of the cleaning verification cards.

vii. *Cost of cleaning verification.* Some commenters were concerned that the cleaning verification protocols are too impractical, burdensome, or time-consuming for many contractors to perform. However, the Dust Study found that cleaning verification only took, on average, slightly less than 13 minutes for experiments where the proposed rule requirements were followed. EPA's Final Economic Analysis estimates that the average cost of cleaning verification ranges from less than \$10 to \$30 in residences, and in public and commercial building COFs it ranges from less than \$10 to less than \$50.

viii. *Availability of cleaning verification card.* One commenter asked about the availability of the cleaning verification card, specifically, who would produce them, where would they be available, and how often do they need to be replaced. EPA intends to produce the cleaning verification cards and to make them available at accredited renovator training courses and upon request from the National Lead Information Center.

ix. *Third-parties.* Several commenters argued that a third party should perform cleaning verification (or visual inspection, in the case of exterior jobs) rather than the certified renovator. Commenters saw a conflict of interest, since by performing the cleaning verification the certified renovator is evaluating the effectiveness of his or her own work. Some thought the subjective nature of the method left it open to misinterpretation or fraud. Commenters were concerned that given the competitive pressures of the renovation industry and lack of independent oversight, it was not realistic to expect all renovators to follow the cleaning verification protocol in good faith. Others worried that a renovator might feel pressured to produce a passing result, perhaps to the point of recording false results. One commenter stated that those who would not comply with the cleaning procedure are unlikely to comply with cleaning verification.

Again, as described above, EPA addressed potential conflicts-of-interest in its lead-based paint program in the preamble to the final Lead-based Paint Activities Regulations. That discussion outlined two reasons for not requiring that inspections or risk assessments, abatements, and post-abatement clearance testing all be performed by different entities. The first was the cost savings and convenience of being able to hire just one firm to perform all necessary lead-based paint activities. The second was the potential regional scarcity of firms to perform the work. EPA believes that these considerations are equally applicable to renovations, and perhaps more compelling, given the objective of keeping this rule simple and relatively inexpensive. EPA is concerned that a requirement that contractors engage a third party for every renovation job will add undue complication and expense to

home renovations, and that it could delay completion of renovation jobs. There are estimated to be 8.4 million renovation events annually. Moreover, as stated above, it is not uncommon for regulated entities to make determinations relating to their regulated status. Thus, after weighing these competing considerations, EPA has decided to take an approach that is consistent with the approach taken in the 402(a) Lead-based Paint Activities Regulation and not require third party visual inspections, testing, or cleaning verification.

x. *Relationship between cleaning verification and the regulatory lead-based paint hazard standards.* Some commenters contend that cleaning verification is not protective because it was designed to pass based on the regulatory hazard standard for floors. These commenters contend that this level is too high to be protective and that continuing to use this level is unwarranted given more recent data that demonstrates that lead causes neurocognitive effects at levels much lower than 10 µg/dL, the current CDC blood lead level of concern which was used in establishing the regulatory hazard standards.

EPA interprets the statutory directive to take into account safety when promulgating work practice standards as meaning that such work practice standards should be established in relation to lead-based paint hazards—as identified pursuant to TSCA section 403. There is no level of lead exposure that can yet be clearly identified, with confidence, as clearly not being associated with potentially increased risk of deleterious health effects. EPA does not believe the intent of Congress was to require elimination of all possible risk arising from a renovation, nor is EPA aware of a method that could reliably and effectively accomplish this. Given that the hazard standards are the trigger for regulation under section 402(c)(3) and that they are set through rulemaking, EPA has concluded that it makes most sense to use the same standards as the target level for safe work practices. Otherwise, the potential is created for a scheme under which any renovation activities found not to create hazards are not regulated at all, whereas renovation activities found to create hazards trigger requirements designed to leave the renovation site cleaner than the unregulated renovations. Given the Congressional intent that the section 403 hazard standards apply for purposes of subchapter IV of TSCA, EPA is applying them as the target level for safe work practices, which include the cleaning verification process, in this rule.

8. *Consistency with HUD.* Several commenters recommended that EPA adopt HUD's clearance requirement for activities other than abatement, which some commenters noted has been successfully implemented in projects in federally assisted housing. One pointed out that renovators have accepted HUD's clearance testing protocol, and implementing the "white glove" method will cause confusion in the industry and give contractors a reason for not following lead-safe work practices. A commenter recommended that EPA adopt HUD's standard for exterior clearance of visual inspection of the work area and a soil

test. Commenters expressed concern that the final rule could undermine more stringent State and local standards, and asked EPA to make clear that more stringent state and local requirements for clearance would apply despite the lack of mandatory clearance in the final rule.

This final regulation does not supersede more stringent or different requirements for interim control projects or renovations regulated by HUD, the States, or local jurisdictions. Renovation firms are still responsible for complying with all applicable Federal, State, or local laws when conducting renovations. In some cases, this may mean that dust clearance testing must be performed at the conclusion of a renovation rather than cleaning verification. EPA believes that renovation firms will be able to integrate these new requirements into their existing business practices with very little difficulty.

EPA also notes that the scope of the housing covered by HUD is different than the scope covered by this final rule. As noted by the commenter, HUD covers activities in projects in federally assisted housing. The occupancy patterns, including turn-over, will be different than in the general population covered by this final rule. While there is some overlap, there are substantial differences. Thus, EPA believes that total consistency with HUD is not needed.

9. *Optional use of clearance.* In the 2006 Proposal, EPA proposed to allow optional dust clearance sampling at the completion of renovation activities instead of the post-renovation cleaning verification described in § 745.85(b). Some commenters agreed that the decision whether to perform clearance at the conclusion of the job should be left to the homeowner. One commenter asked EPA to require that, if a resident arranged for clearance testing and found lead hazards, the contractor would have to re-clean to the resident's satisfaction.

As discussed, dust clearance sampling and cleaning verification are not surrogates and EPA is not requiring renovation firms to perform an abatement, i.e., eliminate all lead-based paint hazards, as part of a renovation. The Dust Study demonstrated that cleaning verification is quite often needed to minimize exposure to dust-lead hazards created during renovations. EPA is concerned that if dust clearance sampling were allowed instead of cleaning verification, without an accompanying requirement that the renovation firm re-clean until clearance is achieved, the rule would actually be less protective because the surfaces in the work area could be left less clean than if cleaning verification were performed.

In response to these comments, EPA has further considered the issue and decided to allow dust clearance sampling instead of cleaning verification only in certain limited situations. EPA agrees with the commenters that, if the rule were to allow clearance sampling instead of verification, EPA would have to require the renovator to achieve clearance, otherwise, there would be no check on whether the

renovation had been safely performed. HUD's Lead Safe Housing Rule requires clearance to be achieved in many situations, as do several States. For example, the State of New Jersey requires dust clearance sampling and clearance in certain situations in multi-unit rental housing. As noted in Unit III.G. of this preamble, States, Territories, and Tribes may choose to have as protective as or more protective requirements than this final rule. One example of a more protective requirement would be a requirement to perform dust clearance testing and achieve clearance after renovations. Another example may be requiring that trained renovation workers demonstrate achievement of clearance levels by other cleaning verification methods, such as using newer technologies. If a firm can demonstrate, for example, using data obtained in the field, that it regularly meets the clearance standards without using the EPA specified approach but rather by using newer technology or alternative methods, a state may request that EPA evaluate such a provision as being as protective as or more protective than the methods described in this final rule.

Therefore, in situations where the contract between the renovation firm and the property owner or another regulation, such as HUD's Lead-Safe Housing Rule or a state regulation, requires dust clearance sampling by a properly qualified person and requires the certified renovator or a worker under the direction of the certified renovator to re-clean until clearance is achieved, EPA will allow the renovation firm to use both dust clearance testing and clearance instead of the cleaning verification step.

Property owners in other situations may still choose to perform dust testing at any time, such as after a renovation, including cleaning verification, has been completed. EPA recommends that property owners who choose to have dust testing performed use certified dust sampling professionals such as inspectors, risk assessors, or dust sampling technicians. EPA also recommends that property owners who wish to have dust testing performed after a renovation reach an agreement with the renovation firm up front as to what will happen based on the results of the dust testing, such as whether additional cleaning will be performed if the surfaces do not achieve the clearance standards in 40 CFR 745.227(e)(8)(viii).

F. Recordkeeping for Renovation Firms

1. *Recordkeeping*—a. *Pre-renovation education*. 40 CFR 745.86 already requires that persons performing renovations in target housing document compliance with the lead hazard information distribution provisions of the Pre-Renovation Education Rule. Consistent with the 2006 Proposal, this final rule deletes existing 40 CFR 745.88 because it contains only sample acknowledgment statements for the purpose of documenting compliance with the information distribution requirements and is thus unnecessary. EPA received no comments on this proposed deletion. In addition, EPA received no substantive

comments on the sample acknowledgment form provided with the proposed rule. New sample acknowledgment forms incorporating language consistent with this final rule and reflecting commenter editorial suggestions are available on EPA's website at <http://www.epa.gov/lead> and from the National Lead Information Center at 1-(800)-424-LEAD (5323).

In addition, as proposed in the 2006 Proposal, EPA has modified paragraph (a) of 40 CFR 745.86 to make compliance with the recordkeeping requirements the responsibility of the renovation firm, not the certified renovator. Although, as discussed below, this final rule requires the certified renovator assigned to a renovation to certify compliance with the work practice requirements for that renovation, the renovation firm may choose to delegate other tasks associated with recordkeeping requirements to someone other than a certified renovator. For example, this rule does not require a certified renovator to distribute lead hazard information to owners and occupants before a renovation, nor does it require a certified renovator to obtain the necessary acknowledgment statements or certified mail receipts. The renovation firm may decide that it is more efficient to have someone other than the certified renovator perform these tasks.

As described in Unit III.B.2. of this preamble, this final rule expands the information distribution requirements to renovations in child-occupied facilities. In proposing this expansion, the 2007 Supplemental Proposal included associated recordkeeping requirements for firms performing renovations in child-occupied facilities. Although EPA did receive comments on extending the information distribution requirements to child-occupied facilities, none of these comments specifically addressed the recordkeeping provisions themselves. EPA has determined that the recordkeeping requirements are an important part of monitoring compliance with and ensuring the effectiveness of the information distribution provisions of this rule. Therefore, this final rule retains the existing recordkeeping requirements for pre-renovation lead hazard information distribution in target housing and extends those recordkeeping requirements to renovations in child-occupied facilities. Firms performing renovations in target housing or child-occupied facilities must obtain and retain signed and dated acknowledgements of receipt of the lead hazard information from building owners or a certificate of mailing for such information. In addition, renovation firms must obtain and retain signed and dated acknowledgments of receipt from the occupant (the resident of the housing unit being renovated or the proprietor of the child-occupied facility) or certificates of mailing for such information, or the firm must prepare a certification that documents the attempts made to provide this information to the occupants. For renovations in common areas in target housing, the firm must also document the steps taken to provide information to the tenants with access to the common area being renovated. Finally, firms performing renovations in child-

occupied facilities must take steps to provide information to the parents and guardians of children under age 6 using the facility. Firms may do this by either mailing each parent or guardian the lead hazard information pamphlet and a general description of the renovation or by posting informational signs where parents and guardians are likely to see them. Informational signs must be accompanied by a posted copy of the pamphlet or information on how to obtain the pamphlet at no charge to interested parents or guardians. The firm's activities with respect to parents and guardians must also be documented.

b. *Documentation of compliance with other regulatory provisions.* This final rule provides for a number of exceptions. Unit III.A.3. of this preamble describes an exception for renovations in owner-occupied target housing that is neither the residence of a child under age 6 or a pregnant woman, nor a child-occupied facility. In order for a renovation to be eligible for this exception, the renovation firm must obtain a signed statement from the owner of the housing to the effect that he or she is the owner of the housing to be renovated, that he or she resides in the housing to be renovated, that no child under 6 or no pregnant woman resides there, that the housing is not a child-occupied facility, and that the owner acknowledges that the work practices to be used during the renovation will not necessarily include all of the work practices contained in EPA's renovation, repair, and painting rule. Consistent with the 2006 Proposal and the 2007 Supplemental Proposal, this final rule requires renovation firms to maintain this signed statement, which must include the address of the housing being renovated, for 3 years after the completion of the renovation. Again, although EPA received comments on the merits of this exception, no comments were directed specifically to the recordkeeping requirement. EPA has determined that the recordkeeping requirement is necessary to allow EPA to monitor compliance with the terms of this exception.

This final rule also requires firms performing renovations to retain documentation of compliance with the work practices and other requirements of the rule. Specifically, the firm must document that a certified renovator was assigned to the project, that the certified renovator provided on-the-job training for workers used on the project, that the certified renovator performed or directed workers who performed the tasks required by this final rule, and that the certified renovator performed the post-renovation cleaning verification. This documentation must include a copy of the certified renovator's training certificate. Finally, the documentation must include a certification by the certified renovator that the work practices were followed with narration as applicable. The certification must include the specific information listed in § 745.86(b)(7). The firm must keep this information for 3 years after the completion of the renovation.

The 2006 Proposal also included a requirement that renovation firms maintain documentation of compliance with the renovator and

worker training requirements and the work practice requirements. This documentation would have had to include signed and dated descriptions of how activities performed by the certified renovator were conducted in compliance with the proposed requirements. To demonstrate how these recordkeeping requirements might be met, EPA prepared and placed into the docket a draft recordkeeping checklist.

EPA received many comments on the substance of these recordkeeping requirements and on the draft recordkeeping checklist. Some commenters thought that the purpose of the recordkeeping requirement should be to provide important information to consumers or to serve as part of the record of whether a particular structure was lead-safe. Some, but not all of these commenters suggested that there was no need for the renovation firm to retain the records it prepares. Rather, the records should be given to the owners and occupants of the building either before or after the renovation. However, as proposed, the recordkeeping requirement served two purposes. The first is to allow EPA or an authorized State to review a renovation firm's compliance with the substantive requirements of the regulation through reviewing the records maintained for all of the renovation jobs the firm has done. The second is to remind a renovation firm what it must do to comply. EPA envisioned that renovation firms would use the recordkeeping requirements and checklist as an aid to make sure that they have done everything that they are required to do for a particular renovation. For these two purposes, there is no substitute for recordkeeping by renovation firms.

However, EPA agrees with those commenters that felt that the recordkeeping requirements were vague, particularly in light of the draft recordkeeping checklist itself and the amount of time that EPA estimated it would take a renovation firm to complete the checklist. Many commenters said that it was unclear how much detail EPA would be looking for in descriptions of how the firm complied with the various work practices, and some noted that an extensive narrative would contribute no more to compliance or enforcement than a box checked to indicate that the requirements had been complied with.

In response to these commenters, EPA has revised that draft recordkeeping checklist to be more in the nature of a checklist, with a certification that the representations on the form are true and correct. Narrative information is still required where necessary, such as an identification of the brand of test kits used, the locations where they were used, and the results. EPA has also revised the regulatory text to describe the specific information that must be provided and the specific items for which a certification of compliance is required. The regulatory text at 40 CFR 745.86(b)(7) now contains a list of work practice elements that must be certified as having been performed. In response to two commenters that suggested that the only person truly capable of certifying that the lead-safe work practices were followed on a particular job would be the certified renovator assigned to that job, EPA

is requiring the certification to be completed by the certified renovator assigned to the renovation. EPA has determined that a review of the records maintained by renovation firms will be an effective method of determining whether a particular firm is generally complying with the regulations or not.

2. *Notification to EPA.* In the 2006 Proposal, EPA requested comment on, but did not propose, a requirement that renovation firms notify EPA before beginning a covered renovation project. Most commenters supported a notification requirement, arguing notifications would provide information to EPA about where renovation activities will be occurring, so EPA could inspect ongoing renovation projects for compliance with the requirements of this rule. These commenters stated that EPA would be unable to enforce the requirements of the rule without a notification provision. Some commenters also suggested that the act of informing EPA of their activities provides a powerful incentive for renovation firms to comply. Other commenters observed that prior notification for every covered renovation would be too burdensome for the regulated community and for the Agency. Some of these commenters suggested that notifications only be required for renovations involving high-risk methods, housing where a child under age 6 or a pregnant woman resides, or renovations involving multiple rooms in a housing unit.

This final rule does not include a prior notification requirement. EPA disagrees with the notion that there is no way to enforce this regulation without a prior notification requirement. As stated above in the discussion on recordkeeping, EPA believes that a review of a renovation firm's records will demonstrate whether or not a renovation firm generally complies with the regulations. In addition, as at least one commenter noted, many renovations require a building permit from the local permitting authority. EPA can work with the local authorities to identify inspection targets. EPA can also follow up on tips and complaints.

EPA agrees with those commenters that believe that prior notification for every project is simply too burdensome for the regulated community and for the Agency. If the streamlined, telephone-based system recommended by some of the commenters were implemented, it would reduce the initial burden on the renovation firms. However, EPA would still have to process millions of such notifications annually, and the collective burden on renovation firms and the government would be considerable. Rather than require millions of notifications annually, the great majority of which would never be reviewed, EPA prefers to use other methods for targeting renovation projects for inspections.

An initially attractive option considered by EPA was a prior notification requirement for a subset of covered renovation projects. This option could potentially reduce the notifications received to a

manageable level, while preserving the benefits of a prior notification requirement, but EPA was unable to develop appropriate criteria for defining which renovations would require prior notification. EPA considered requiring prior notification for renovations using certain high-risk practices, the practices prohibited by the HUD Lead Safe Housing Rule and EPA's Lead-based Paint Activities Regulations. However, EPA ultimately decided, as described in Unit III.E.6. of this preamble, to prohibit most of those practices for covered renovations. Requiring prior notifications only for renovations in housing where a child under age 6 resides and in child-occupied facilities would not significantly reduce the notifications that would be required. EPA determined that a prior notification requirement tied to project size would not be feasible or effective, because the hazard potential from a renovation job is a combination of the size of the project and the activity being performed.

With regard to the compliance mindset mentioned by some commenters, EPA believes that the recordkeeping requirements are a less burdensome way to achieve the same goal. In fact, a prior notification requirement could lead to EPA targeting for inspection those persons who are most likely to be making an effort to comply with the substantive requirements of the regulation. The person who would not bother to comply with the substantive provisions of this rule would most likely avoid filing a prior notification to EPA before beginning a covered renovation, repair, or painting project. These persons are more likely to be performing renovations in a non-compliant manner than are persons who have complied with a prior notification requirement and told EPA where to find them.

EPA has therefore determined that a prior notification requirement is not an effective or efficient means of facilitating the monitoring of compliance with this regulation. States, Territories, and Tribes developing their own renovation, repair, and painting programs may come to a different conclusion. These jurisdictions are free to establish prior notification schemes that make sense for their community.

G. State, Territorial, and Tribal Programs

1. *In general.* Because of the enormous number of renovation activities that occur in this country on an annual basis, EPA welcomes the help of its State, Territorial, and Tribal partners to ensure that these renovations are performed by trained persons in accordance with this final rule. This final rule establishes, in accordance with TSCA section 404 and EPA's Policy for the Administration of Environmental Programs on Indian Reservations (Ref. 46), requirements for the authorization of State, Territorial, and Tribal renovation, repair, and painting programs. The process for obtaining authorization to operate these programs in lieu of the Federal program is the same process used to authorize State, Territorial, and Tribal lead-Based Paint Activity or

Pre-Renovation Education programs found in 40 CFR part 745, subpart Q.

Interested States, Territories, and Indian Tribes may apply for, and receive authorization to, administer and enforce all of the elements of the new subpart E, as amended. States, Territories and Tribes may choose to administer and enforce just the existing requirements of subpart E, the pre-renovation education elements, or all of the requirements of the proposed subpart E, as amended. The 2006 Proposal and the 2007 Supplemental Proposal would not have provided for the authorization of State, Territorial, or Tribal programs that include only the training, certification, accreditation, and work practice requirements for renovation, repair, and painting programs and not the pre-renovation education provisions of subpart E. EPA proposed this approach because the Agency believes that the pre-renovation education provisions are an integral part of ensuring that consumers have the information they need to make informed decisions about renovation practices in their homes and other buildings. In addition, consistent with the proposals, this final rule encourage renovation firms to use the existing pamphlet acknowledgment process to provide owner-occupants of target housing with the opportunity to opt out of the training, certification, and work practice requirements of the rule if they reside in the housing to be renovated, there is no child under age 6 or pregnant woman in residence, the housing does not otherwise meet the definition of child-occupied facility, and the owner acknowledges that the work practices to be used during the renovation will not necessarily include all of the lead-safe work practices contained in EPA's renovation, repair, and painting rule.

One State commenter disagreed with EPA's proposed approach and requested that EPA authorize State, Territorial or Tribal programs that incorporate only the training, certification, accreditation, and work practices of this final rule because TSCA section 404 allows states to administer and enforce the standards, regulations, or other requirements established under TSCA section 402 or TSCA section 406 or both. EPA agrees with this commenter's reading of TSCA. Therefore, this final rule provides for the authorization of State, Territorial, or Tribal programs that include either the pre-renovation education requirements of 40 CFR part 745, subpart E, or the training, certification, accreditation and work practice requirements of this rule, or both.

States, Territories, and Tribes that wish to administer and enforce the pre-renovation education provisions of subpart E, as amended, must include both target housing and child-occupied facilities within the scope of their program. Similarly, States, Territories, and Tribes that are also interested in obtaining authorization to administer and enforce the training, certification, accreditation, work practice, and recordkeeping elements of subpart E, as amended, must include both target housing and child-occupied facilities within the scope of their program. States with existing authorized pre-renovation education

programs are required to demonstrate that they have modified their programs to include child-occupied facilities. These States must provide this demonstration no later than the first report submitted pursuant to 40 CFR 745.324(h) on or after [*insert date 1 year after publication in the Federal Register*].

2. *Process.* The authorization process currently codified at 40 CFR part 745, subpart Q, will be used for the purpose of authorizing State, Territorial, and Tribal renovation, repair, and painting programs. States, Territories, and Tribes seeking authority for their programs must obtain public input, then submit an application to EPA. Applications must contain a number of items, including a description of the State, Territorial, or Tribal program, copies of all applicable statutes, regulations, and standards, and a certification by the State Attorney General, Tribal Counsel, or an equivalent official, that the applicable legislation and regulations provide adequate legal authority to administer and enforce the program. The program description must demonstrate that the State, Territorial, or Tribal program is at least as protective as the Federal program. In this case, the Federal program consists of the requirements for training, certification, and accreditation and the work practice standards of this final rule.

One commenter suggested that EPA require States with a currently authorized TSCA 402(a) lead-based paint activities program to submit only an amended application for incorporating the TSCA section 402(c)(3) renovation, repair, and painting program requirements since many of the required documents would be the same as those submitted for the original TSCA 402(a) application. Furthermore, the commenter recommended that a letter from the State agency identified in the original 402(a) authorization application with a synopsis detailing how the State proposes to administer and enforce the renovation, repair, and painting program serve as an amended application. EPA has determined that a new application for authorization for the renovation, repair, and painting program is necessary because there may be a different State agency or consortia of agencies implementing and enforcing this program, a long time may have elapsed since most States submitted their TSCA section 402(a) program application, and many of the requirements within the elements of the renovation, repair, and painting program differ from their counterparts in the lead-based paint activities program.

To be eligible for authorization to administer and enforce the training, certification, accreditation, and work practice requirements of this final rule, State, Territorial, and Tribal renovation programs must contain certain minimum elements, e.g., work practice standards and procedures and requirements for the certification of individuals and/or firms, that are very similar to the existing minimum elements specified in 40 CFR 745.326(a) for lead-based paint activities programs. In order to be authorized, State, Territorial, or Tribal programs must have procedures and requirements for the accreditation of training

programs, which can be as simple as procedures for accepting training provided by an EPA-accredited provider, or a provider accredited by another authorized State, Territorial, or Tribal program. Procedures and requirements for the certification of renovators are also necessary. At a minimum, these must include a requirement that certified renovators have taken accredited training, and procedures and requirements for re-certification. State, Territorial, and Tribal programs applying for authorization must also include work practice standards for renovations that ensure that renovations are conducted only by certified renovation firms and the renovations are conducted using work practices at least as protective as those of the Federal program. As is the current practice with lead-based paint activities, EPA will not require State, Territorial, or Tribal programs to certify both firms and individuals that perform renovations. States, Territories and Tribes may choose to certify either firms or individuals, so long as the individuals that perform the duties of renovators are required to take accredited training.

3. *Implementation.* In order to provide interested States, Territories and Tribes time to develop, or begin developing renovation, repair, and painting programs in accordance with this rule, EPA will not begin to actively implement the Federal program until [*insert date 1 year after date of publication in the **Federal Register***], at which time EPA will begin accepting applications for training program accreditation. Several commenters thought 1 year would be adequate for the purpose of allowing States, Territories, and Tribes to develop their own programs, while others expressed concern that 1 year would not be enough time to get these programs developed and authorized. Most commenters who expressed an opinion on this topic generally agreed that an implementation delay is necessary. Reasons given in support of a delay were conservation of State financial and administrative resources and the fact that some States have had difficulties in retraining contractors to new State-specific requirements after the contractors had become accustomed to working under the Federal program. In contrast, some commenters argued that, in light of the 2010 goal, no delay whatsoever was warranted. This final rule retains the 1 year implementation delay set forth in the 2006 Proposal. EPA has determined that this period of time represents an appropriate balance between the need to implement this rule quickly and concerns over potential duplication of effort and additional costs incurred by the regulated community if EPA begins accrediting training providers and certifying firms in jurisdictions that are also working towards implementing their own programs. States, Territories, and Tribes may begin the authorization process at any time after the effective date of this final rule, even after the Federal program has been implemented in their jurisdiction.

Some commenters were concerned about the effect of this rule on existing State programs. Several commenters asked EPA to expressly state that this rule does not pre-empt existing State programs and that State programs that are more stringent than the Federal program will

be eligible for authorization. One commenter noted that the number of houses with lead contaminated paint is disproportionately distributed throughout the U.S. This commenter pointed out that this apparent disparity supports the need for State control of lead programs and for EPA to practice “regulatory restraint.” According to this commenter, this “regulatory restraint” will allow States with more severe lead paint problems to impose stricter standards and requirements regarding certification and work practices without imposing unnecessary burdens on States with less severe problems.

This final rule does not preempt existing programs that address renovations. However, to the extent that these programs are less protective than the requirements of this final rule, the requirements of this final rule will apply. To be eligible for authorization, State, Territorial, and Tribal programs need not exactly duplicate the Federal program contained in this final rule, but they must still meet the requirement of TSCA section 404 that they be “at least as protective as” the Federal program. It would be difficult for the Agency to describe specific requirements that would make a program more or less “protective.” EPA will review each program application separately against the protections provided by this final rule.

Several commenters expressed concern regarding the uniformity and consistency of State programs. Some recommended that EPA take States’ concerns into account, but guarantee uniformity of State programs by prohibiting States from arbitrarily deviating from program elements. Others noted that if there are uniform regulations for approved training courses for State certification, there should be reciprocity between States since many people work in multiple States. One commenter suggested that, in an effort to promote consistency, States institute a lead-safety test that renovators must pass prior to receiving permits to conduct work. Several commenters noted that a lack of reciprocity between States and/or duplicative or divergent certification requirements will add an unnecessary burden and level of complexity for renovation and remodeling firms, especially those working in multi-State areas. One commenter argued that this could lead to a problem in maintaining certifications similar to the problem the commenter believes exists in maintaining lead-based paint inspector, risk assessor, and other certifications associated with TSCA section 402 abatements. One suggested that EPA should exert control over the right to refuse approval of State programs unless they provide for reciprocity with the Federal program and programs of other jurisdictions approved by EPA.

The standard of EPA review for State, Territorial, and Tribal programs under TSCA section 404 is that they be “at least as protective” as the Federal program. In addition, TSCA section 404 (e) reserves the right of States and their political subdivisions to impose requirements that are more stringent than the Federal program. EPA interprets this to mean that EPA cannot compel States, Territories, and Tribes to adopt

programs identical to the Federal program or to establish reciprocity provisions. However, EPA continues to encourage States, Territories, and Tribes that may be considering establishing their own renovation programs to keep reciprocity in mind as they move forward. The benefits to be derived from reciprocity arrangements with the Federal program and other authorized jurisdictions include potential cost-savings from reducing duplicative activity and the development of a professional renovation workforce more quickly, thus providing maximum flexibility to State, Territorial, or Tribal residents. In addition, the Agency encourages States, Territories and Tribes to consider the use of existing certification and accreditation procedures as they develop their programs. These existing programs need not be limited to lead-based paint. For example, a State may choose to add lead-safe renovation requirements to their existing contractor licensing programs.

H. Effective Dates

This rule will take effect on *[insert date 60 days after date of publication in the **Federal Register]***. This rule will be implemented according to the following schedule:

1. As of *[insert date 60 days after date of publication in the **Federal Register]***.

a. States, Territories, and Tribes may begin applying for authorization to administer and enforce their own renovation, repair, and painting programs. EPA will begin authorizing States, Territories, and Tribes as soon as it receives their complete applications.

b. No training program may provide, offer, or claim to provide training or refresher training for EPA certification as a renovator or a dust sampling technician without accreditation from EPA under 40 CFR 745.225.

2. As of *[insert date 1 year after publication in the **Federal Register]***. Training programs for renovators or dust sampling technicians may begin applying for accreditation under 40 CFR 745.225. EPA will begin accrediting training programs as soon as it receives complete applications from training providers. Individuals who wish to become certified renovators or dust sampling technicians may begin taking accredited training as soon as it is available.

3. As of *[insert date 18 months after date of publication in the **Federal Register]***. Renovation firms may begin applying for certification under 40 CFR 745.89. EPA will begin certifying renovation firms as soon as it receives their complete applications.

4. As of *[insert date 2 years after date of publication in the **Federal Register]***. The rule will be fully implemented.

a. No firm may perform, offer, or claim to perform renovations without certification from EPA under 40 CFR 745.89 in target housing or child-occupied facilities, unless, in the case of owner-occupied target housing, the firm has obtained a statement signed by the owner that the renovation will occur in the owner's residence, no child under age 6 resides there, the housing is not a child-occupied facility, and the owner acknowledges that the work practices to be used during the renovation will not necessarily include all of the lead-safe work practices contained in EPA's renovation, repair, and painting rule.

b. All renovations must be directed by renovators certified in accordance with 40 CFR 745.90(a) and performed by certified renovators or individuals trained in accordance with 40 CFR 745.90(b)(2) in target housing or child-occupied facilities, unless, in the case of owner-occupied target housing, the firm performing the renovation has obtained a statement signed by the owner that the renovation will occur in the owner's residence, no child under age 6 resides there, the housing is not a child-occupied facility, and the owner acknowledges that the work practices to be used during the renovation will not necessarily include all of the lead-safe work practices contained in EPA's renovation, repair, and painting rule.

c. All renovations must be performed in accordance with the work practice standards in 40 CFR 745.85 and the associated recordkeeping requirements in 40 CFR 745.86(b)(6) and (b)(7) in target housing or child-occupied facilities, unless, in the case of owner-occupied target housing, the firm performing the renovation has obtained a statement signed by the owner that the renovation will occur in the owner's residence, no child under age 6 resides there, the housing is not a child-occupied facility, and the owner acknowledges that the work practices to be used during the renovation will not necessarily include all of the lead-safe work practices contained in EPA's renovation, repair, and painting rule.

With respect to the new renovation-specific pamphlet and the requirements of the Pre-Renovation Education Rule, as of the effective date of the rule (*[insert date 60 days after date of publication in the Federal Register]*), renovators or renovation firms performing renovations in States and Indian Tribal areas without an authorized Pre-Renovation Education Rule program may provide owners and occupants with either of the following EPA pamphlets: *Protect Your Family From Lead in Your Home*; or *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools*. As of *[insert date 8 months after date of publication in the Federal Register]*, "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools" must be used exclusively.

IV. References

The following is a list of the documents that are specifically referenced in this final rule and placed in the public docket that was

established under Docket ID number EPA–HQ–OPPT–2005–0049. For information on accessing the docket, refer to the **ADDRESSES** unit at the beginning of this document.

1. U.S. Environmental Protection Agency (USEPA). Air Quality Criteria for Lead (September 29, 2006).

2. President's Task Force on Environmental Health Risks and Safety Risks to Children. Eliminating Childhood Lead Poisoning: A Federal Strategy Targeting Lead Paint Hazards (February 2000).

3. USEPA. Lead; Renovation, Repair, and Painting Program; Proposed Rule. **Federal Register** (71 FR 1588, January 10, 2006).

4. USEPA. Lead; Requirements for Lead-based Paint Activities; Final Rule. **Federal Register** (61 FR 45778, August 29, 1996).

5. USEPA. Lead; Fees for Accreditation of Training Programs and Certification of Lead-based Paint Activities Contractors; Final Rule. **Federal Register** (64 FR 31091, June 9, 1999).

6. USEPA. Lead; Notification Requirements for Lead-Based Paint Abatement Activities and Training; Final Rule. **Federal Register** (69 FR 18489, April 8, 2004).

7. USEPA, Consumer Product Safety Commission (CPSC), U.S. Department of Housing and Urban Development (HUD). Protect Your Family From Lead in Your Home (EPA 747-K-99-001, June 2003).

8. USEPA. Lead; Requirements for Hazard Education Before Renovation of Target Housing; Final Rule. **Federal Register** (63 FR 29907, June 1, 1998).

9. USEPA. Lead; Identification of Dangerous Levels of Lead; Final Rule. **Federal Register** (66 FR 1206, January 5, 2001).

10. USEPA. Reducing Lead Hazards When Remodeling Your Home (EPA747-K-97-001, September 1997).

11. USEPA. Lead Exposure Associated With Renovation and Remodeling Activities: Phase I, Environmental Field Sampling Study (EPA 747-R-96-007, May 1997).

12. USEPA. Lead Exposure Associated With Renovation and Remodeling Activities: Phase II, Worker Characterization and Blood-Lead Study (EPA 747-R-96-006, May 1997).

13. USEPA. Lead Exposure Associated With Renovation and Remodeling Activities: Phase III, Wisconsin Childhood Blood-Lead Study (EPA 747-R-99-002, March 1999).

14. USEPA. Lead Exposure Associated With Renovation and Remodeling Activities: Phase IV, Worker Characterization and Blood-

Lead Study of R&R Workers Who Specialize in Renovation of Old or Historic Homes (EPA 747-R-99-001, March 1999).

15. USEPA. Lead; Renovation, Repair, and Painting Program; Supplemental Notice of Proposed Rulemaking. **Federal Register** (72 FR 31022, June 5, 2007).

16. USEPA. Lead; Renovation, Repair, and Painting Program; Notice of Availability. **Federal Register** (72 FR 12582, March 16, 2007).

17. USEPA. Characterization of Dust Lead Levels After Renovation, Repair, And Painting Activities. (November 13, 2007).

18. USEPA. Lead Safety for Remodeling, Repair, And Painting. Joint EPA/HUD Renovation Training Curriculum (EPA 747-B-03-001/2, July 2003).

19. National Association of Home Builders (NAHB). Lead Safe Work Practices Survey Project Report. Prepared by Atrium Environmental Health and Safety Services (November 9, 2006).

20. McMillan Associates. Response to SBREFA Panel Recommendations for Further Analysis of Existing Phase III Data (August 6, 2001).

21. U.S. Department of Health and Human Services (HHS), U.S. Public Health Service (PHS), CDC. Children with Elevated Blood Lead Levels Attributed to Home Renovation and Remolding Activities--New York, 1993-1994. Morbidity and Mortality Weekly Report (45(51); 1120-1123, January 3, 1997).

22. Reissman, Dori B., Thomas D. Matte, Karen L. Gurnite, Rachel B. Kaufmann, and Jessica Leighton. "Is Home Renovation or Repair a Risk Factor for Exposure to Lead Among Children Residing in New York City?" *Journal of Urban Health: Bulletin of the New York Academy of Medicine*. Vol. 79, No. 4, 502-511, (December 2005).

23. USEPA. Lead; Requirements for Lead-based Paint Activities; Proposed Rule. **Federal Register** (59 FR 45872, September 2, 1994).

24. USEPA. Office of Pollution Prevention and Toxics (OPPT) "Economic Analysis for the TSCA Lead Renovation, Repair, and Painting Program Final Rule for Target Housing and Child-Occupied Facilities" (March 2008).

25. S. Rep. 102-332, P.L. 102-550, Housing and Community Development Act of 1992 (July 23, 1992).

26. National Institute of Standards and Technology (NIST). Spot Test Kits for Detecting Lead in Household Paint, a Laboratory Evaluation (NISTIR 6398, May 2000).

27. HUD. National Survey of Lead and Allergens in Housing, Volume I: Analysis of Lead Hazards, Final Report, Revision 7.1. (October 31, 2002).
28. ASTM International. Standard Practice for Evaluating the Performance Characteristics of Qualitative Chemical Spot Test Kits for Lead in Paint (E 1828-01).
29. USEPA. Lead-Based Paint Pre-Renovation Education Rule; Interpretive Guidance, Part I (May 28, 1999).
30. USEPA and HUD. Lead; Requirements for Disclosure of Information Concerning Lead-Based Paint in Housing; Final Rule. **Federal Register** (61 FR 9064, March 6, 1996).
31. USEPA, HUD. Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools. (March 2008).
32. USEPA. Lead-Based Paint Pre-Renovation Education Rule; Interpretive Guidance, Part II (October 15, 1999).
33. USEPA. Lead Sampling Technician Course (EPA 747-B-00-002, July 2000).
34. HUD. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (June 1995).
35. USEPA. Lead Dust Minimization Work Practices for Renovation, Remodeling and Repainting; Draft Technical Manual (September 29, 1998).
36. National Institute for Occupational Safety and Health (NIOSH). Health Hazard Evaluation; Rhode Island Department of Health; HETA 96-0200-2799 (June 2000).
37. USEPA. Electrostatic Cloth and Wet Cloth Field Study in Residential Housing (September 2005).
38. United States Department of Energy. Office of Health, Safety and Security. <http://www.hss.energy.gov/csa/csp/hepa/>
39. Occupational Safety and Health Administration (OSHA), Department of Labor (DOL). Regulatory Flexibility Act Review of the Occupational Safety Standard for Lead in Construction Labor (72 FR 54826, September 27, 2007).
40. Rich, David Q. George G. Rhoads, Lih-Ming Yiin, Junfeng Zhang, Zhipeng Bai, John L. Adgate, Peter J. Ashley, and Paul J. Liroy. "Comparison of Home Lead Dust Reduction Techniques on Hard Surfaces: the New Jersey Assessment of Cleaning Techniques Trial." *Environmental Health Perspectives* 110(9): 889-893 (September 2002).

41. HUD. Evaluation of Household Vacuum Cleaners in the Removal of Settled Lead Dust from Hard Surface Floors. (December 27, 2002, revised February 2006).

42. Lih-Ming Yiin, George G. Rhoads, David Q. Rich, Junfeng Zhang, Zhipeng Bai, John L. Adgate, Peter J. Ashley, and Paul J. Liroy. “Comparison of Techniques to Reduce Residential Lead Dust on Carpet and Upholstery: the New Jersey Assessment of Cleaning Techniques Trial.” *Environmental Health Perspectives* 110(12): 1233-1237. (December 2002).

43. Canadian Mortgage and Housing Corporation (CMHC). “Effectiveness of Clean up Techniques for Lead Paint Dust.” (1992).

44. USEPA. A Comparison of Post-Renovation and Remodeling Surface Cleaning Techniques. Prepared by Clemson Environmental Technologies Laboratory (December 14, 2001)

45. CMHC. “Evaluation of the Cleanup of Lead Paint Dust In Houses.” Prepared by Pinchin Environmental Consultants (1995).

46. USEPA. EPA Policy for the Administration of Environmental Programs on Indian Reservations (November 8, 1984).

47. USEPA. ICR Final Rule Addendum for rulemaking entitled “Lead; Renovation, Repair, and Painting Program; Final Rule” (March 2008).

48 USEPA. Report of the Small Business Advocacy Review Panel on the Lead-based Paint Certification and Training; Renovation and Remodeling Requirements (March 3, 2000).

49. Final Regulatory Flexibility Analysis for the Lead; Renovation, Repair, and Painting Program; Final Rule (March 2008).50. ASTM International. Standard Practice for Clearance Examinations Following Lead Hazard Reduction Activities in Single-Family Dwellings and Child-Occupied Facilities (E 2271-05).

51. ASTM International. Standard Guide for Evaluation, Management, and Control of Lead Hazards in Facilities (E 2052-99).

V. Statutory and Executive Order Reviews

A. Executive Order 12866

Under Executive Order 12866, entitled *Regulatory Planning and Review* (58 FR 51735, October 4, 1993), it has been determined that this rule is a “significant regulatory action” under section 3(f)(1) of the Executive Order because EPA estimates that it will have an annual effect on the economy of \$100 million or more. Accordingly, this action was submitted to the Office of Management and Budget (OMB) for review under Executive Order 12866 and any changes made based on

OMB recommendations have been documented in the public docket for this rulemaking as required by section 6(a)(3)(E) of the Executive Order.

In addition, EPA has prepared an analysis of the potential costs and benefits associated with this rulemaking. This analysis is contained in the Economic Analysis (Ref. 24), which is available in the docket for this action and is briefly summarized here.

1. *Types of facilities.* This rule applies to an estimated 37.8 million pre-1978 facilities. Of these, approximately 37.7 million facilities are located in target housing, either in rental housing, owner-occupied housing where a child under age 6 resides, or owner-occupied housing where no child under age 6 resides but that otherwise meets the definition of a child-occupied facility. Approximately 100,000 facilities are child-occupied facilities in pre-1978 public or commercial buildings.

2. *Options evaluated.* EPA considered a variety of options for addressing the risks presented by renovation, repair, and painting actions where lead-based paint is present. The Economic Analysis analyzed several different options for the scope of the rule, which would limit the coverage of the rule's substantive provisions depending on when the facility was built (such as pre-1960 or pre-1978), and whether or not there are children under the age of 6 or a pregnant woman residing in owner-occupied housing. In some options, coverage of the rule was phased in over time. EPA also considered different options for work practices, such as containment, cleaning, and cleaning verification.

3. *Number of events and individuals affected.* In the first year that all of the rule requirements will be in effect, there will be an estimated 8.4 million renovation, repair, and painting events where lead-safe work practices will be used due to the rule. As a result, there will be approximately 1.4 million children under the age of 6 who will be affected by having their exposure to lead dust minimized due to the rule. There will also be about 5.4 million adults who will be affected. After improved test kits for determining whether a painted surface contains lead-based paint become available (which is assumed in the analysis to occur by the second year of the rule), the number of renovation, repair, and painting events using lead-safe work practices is expected to drop to 4.4 million events per year. No change in the number of exposures avoided due to the rule is expected because the improved test kit will more accurately identify paint without lead, thus reducing the number of events unnecessarily using the required work practices.

4. *Benefits.* The Economic Analysis describes the estimated benefits of the rulemaking in qualitative and quantitative terms. Benefits result from the prevention of adverse health effects attributable to lead exposure. These health effects include impaired cognitive function in

children and several illnesses in children and adults. EPA estimated the benefits of avoided incidence of IQ loss due to reduced lead exposure to children under the age of 6. There are not sufficient data at this time to develop dose-response functions for other health effects in children or for pregnant women. The benefits of avoided exposure to adults were not quantified due to uncertainties about the exposure of adults to lead in dust from renovation, repair, and painting activities in these facilities.

The rule is estimated to result in quantified benefits of approximately \$700 million to \$1,700 million in the first year. The 50-year annualized benefits provide a measure of the steady-state benefits. The quantified IQ benefits to children are expected to be approximately \$700 million to \$1,700 million per year when annualized using a 3% discount rate, and \$700 million to \$1,800 million per year when using a 7% discount rate. The estimated benefits for the other scope options range from approximately \$300 million to \$1,700 million using a 3% discount rate and from \$300 million to \$1,800 million using a 7% discount rate. The benefits from prohibiting certain paint preparation and removal practices in renovations requiring lead-safe work practices under the rule are estimated to be \$400 million to \$900 million per year using a 3% discount rate. There are additional unquantified benefits, including other avoided health effects in children and adults.

5. *Costs.* The Economic Analysis estimates the costs of complying with the rule. Costs may be incurred by contractors that perform renovation, repair, and painting work for compensation, landlords that use their own staff to perform renovation, repair, and painting work in leased buildings; and child-occupied facilities that use their own staff to perform renovation, repair, and painting work.

The rule is estimated to result in a total cost of approximately \$800 million in the first year that all of the rule requirements will be in effect. The cost is estimated to drop to approximately \$400 million per year in the second year when the improved test kits are assumed to become available. The 50-year annualized costs provide a measure of the steady-state cost. Annualized costs of the rule are estimated to be approximately \$400 million per year using either a 3% discount rate or a 7% discount rate. Annualized costs for the other scope options range from approximately \$300 million to approximately \$700 million per year using a 3% discount rate and \$400 million to \$700 million per year using a 7% discount rate. The cost of prohibiting certain paint preparation and removal practices is estimated to cost less than \$10 million per year using either a 3% or a 7% discount rate.

6. *Net benefits.* Net benefits are the difference between benefits and costs. The rule is estimated to result in net benefits of--\$50 million to \$1,000 million in the first year, based on children's IQ benefits alone. The 50-year annualized net benefits for the rule based on children's benefits are estimated to be \$300 million to \$1,300 million per year.

using either a 3% or a 7% discount rate. The annualized net benefits for the other scope options range from approximately--\$50 million to \$1,300 million per year using either a 3% or a 7% discount rate. The net benefits of prohibiting certain paint preparation and removal practices for renovations requiring lead-safe work practices are estimated to be approximately \$400 million to \$900 million per year using either a 3% or a 7% discount rate. There are additional unquantified benefits, including other avoided health effects in children and adults that are not included in the net benefits estimates.

It is important to note that the EPA analysis generates certain results that seem to indicate that more stringent control options yield smaller improvements reducing the risks of elevated blood lead levels in children than do less stringent control options. For example, the analysis estimates that using only containment of dust and debris generated during a RRP activity yields higher benefits than using all of the rule's work practices (containment, specialized cleaning, and cleaning verification). This is the opposite of what one might expect and of what is observed in the Dust Study for the 10 experiments that used the proposed rule cleaning and containment, since the benefits analysis implies that the combination of rule-style containment with rule-style cleaning and verification would result in more exposure than when such containment is combined with conventional cleaning. This is inconsistent with the Dust Study which shows that the largest decreases were observed in the 10 experiments where this final rule's practices of containment, specialized cleaning, and cleaning verification were used. Therefore, the anomalous results are likely to be artifacts of sparse underlying data and modeling assumptions. Although EPA summarizes some of the potential causes of these unexpected results in the Economic Analysis, at this time EPA is unclear as to precisely what is leading to these unexpected results. Because EPA has not determined why the benefits analyses contain anomalous results, EPA has limited confidence in the estimated benefits. EPA does not view the results as being sufficiently robust to represent the difference in magnitude of the benefits across regulatory alternatives. Nevertheless, EPA is confident that there are positive benefits.

B. Paperwork Reduction Act

The information collection requirements contained in this rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An Information Collection Request (ICR) document prepared by EPA, an amendment to an existing ICR and referred to as the ICR Final Rule Addendum (EPA ICR No. 1715.10, OMB Control Number 2070-0155) has been placed in the public docket for this rule (Ref. 47). The information collection requirements are not enforceable until OMB approves them.

The new information collection activities contained in this rule are designed to assist the Agency in meeting the core objectives of TSCA section 402, including ensuring the integrity of accreditation programs for training providers, providing for the certification of renovators, and determining whether work practice standards are being followed. EPA has carefully tailored the recordkeeping requirements so they will permit the Agency to achieve statutory objectives without imposing an undue burden on those firms that choose to be involved in renovation, repair, and painting activities.

Burden under the Paperwork Reduction Act means the total time, effort, or financial resources expended by persons to generate, maintain, retain, 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.

Under this rule, the new information collection requirements may affect training providers and firms that perform renovation, repair, or painting for compensation. Although these firms have the option of choosing to engage in the covered activities, once a firm chooses to do so, the information collection activities contained in this rule become mandatory for that firm.

The ICR document provides a detailed presentation of the estimated burden and costs for 3 years of the program. The aggregate burden varies by year due to changes in the number of firms that will seek certification each year. The burden and cost to training providers and firms engaged in renovation, repair, and painting activities is summarized below.

It is estimated that approximately 170 training providers will incur burden to notify EPA (or an authorizing State, Tribe, or Territory) before and after training courses. The average burden for training provider notifications is estimated at 20 to 100 hours per year, depending on the number of training courses provided. Total training provider burden is estimated to average 9,000 hours per year. There are approximately 211,000 firms estimated to become certified to engage in renovation, repair, or painting activities. The average certification burden is estimated to be 3.5 hours per firm in the year a firm is initially certified, and 0.5 hours in years that it is re-certified (which occurs every 5 years). Firms must also distribute lead hazard information to the owners and occupants of public or commercial buildings that contain child-occupied facilities and in target housing containing child-occupied

facilities. Finally, firms must keep records of the work they perform; this recordkeeping is estimated to average approximately 5 hours per year per firm. Total burden for these certified firms is estimated to average 1,373,000 hours per year. Total respondent burden during the period covered by the ICR is estimated to average approximately 1,382,000 hours per year.

There are also government costs to administer the program. States, Tribes, and Territories are allowed, but are under no obligation, to apply for and receive authorization to administer these requirements. EPA will directly administer programs for States, Tribes, and Territories that do not become authorized. Because the number of States, Tribes, and Territories that will become authorized is not known, administrative costs are estimated assuming that EPA will administer the program everywhere. To the extent that other government entities become authorized, EPA's administrative costs will be lower.

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 codified in Chapter 40 of the CFR, after appearing in the preamble of the final rule, are listed in 40 CFR part 9, are displayed either by publication in the **Federal Register** or by other appropriate means, such as on the related collection instrument or form, if applicable. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

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 purposes of assessing the impacts of this rule on small entities, small entity is defined in accordance with section 601 of the RFA as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (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.

Pursuant to section 603 of the RFA, EPA prepared an initial regulatory flexibility analysis (IRFA) for the proposed rule and convened a Small Business Advocacy Review Panel to obtain advice

and recommendations of representatives of the regulated small entities. A summary of the IRFA, a description of the Panel process, and a summary of the Panel's recommendations can be found in Unit VIII.C. of the preamble to the 2006 Proposal (Ref. 3). A detailed discussion of the Panel's advice and recommendations is found in the Panel Report (Ref. 48).

As required by section of the RFA, we also prepared a final regulatory flexibility analysis (FRFA) for this final rule. The FRFA addresses the issues raised by public comments on the IRFA, which was part of the proposal of this rule. The FRFA is available for review in the docket and is summarized below (Ref. 49).

1. *Legal basis and objectives for the rule.* As discussed in Unit II.A. of this preamble, TSCA section 402(c)(2) directs EPA to study the extent to which persons engaged in renovation, repair, and painting activities are exposed to lead or create lead-based paint hazards regularly or occasionally. After concluding this study, TSCA section 402(c)(3) further directs EPA to revise its Lead-based Paint Activities Regulations under TSCA section 402(a) to apply to renovation or remodeling activities that create lead-based paint hazards. Because EPA's study found that activities commonly performed during renovation and remodeling create lead-based paint hazards, EPA is revising the TSCA section 402(a) regulatory scheme to apply to individuals and firms engaged in renovation, repair, and painting activities. In so doing, EPA has also taken into consideration the environmental, economic, and social impact of this final rule as provided in TSCA section 2(c). The primary objective of the rule is to minimize exposure to lead-based paint hazards created during renovation, repair, and painting activities in housing where children under age 6 reside and in housing where a pregnant woman resides and in housing or other buildings frequented by children under age 6.

2. *Potentially affected small entities.* Small entities include small businesses, small organizations, and small governmental jurisdictions. The small entities that are potentially directly regulated by this rule include: small businesses (including contractors and property owners and managers); small nonprofits (certain day care centers and private schools); and small governments (school districts).

In determining the number of small businesses affected by the rule, the Agency applied U.S. Economic Census data to the SBA's definition of small business. However, applying the U.S. Economic Census data requires either under or overestimating the number of small businesses affected by the rule. For example, for many construction establishments, the SBA defines small businesses as having revenues of less than \$13 million. With respect to those establishments, the U.S. Economic Census data groups all establishments with revenues of \$10 million or more into one revenue bracket. On the one hand, using data for the entire industry would overestimate the number of small businesses

affected by the rule and would defeat the purpose of estimating impacts on small business. It would also underestimate the rule's impact on small businesses because the impacts would be calculated using the revenues of large businesses in addition to small businesses. On the other hand, applying the closest, albeit lower, revenue bracket would underestimate the number of small businesses affected by the rule while at the same time overestimating the impacts. Similar issues arose in estimating the fraction of property owners and managers that are small businesses. EPA has concluded that a substantial number of small businesses will be affected by the rule. Consequently, EPA has chosen to be more conservative in estimating the cost impacts of the rule by using the closest, albeit lower, revenue bracket for which Census data is available. For other sectors (nonprofits operating day care centers or private schools), EPA assumed that all affected firms are small, which may overestimate the number of small entities affected by the rule.

The vast majority of entities in the industries affected by this rule are small. Using EPA's estimates, the renovation, repair, and painting program will affect an average of approximately 189,000 small entities.

3. *Potential economic impacts on small entities.* EPA evaluated two factors in its analysis of the rule's requirements on small entities, the number of firms that would experience the impact, and the size of the impact. Average annual compliance costs as a percentage of average annual revenues were used to assess the potential average impacts of the rule on small businesses and small governments. This ratio is a good measure of entities' ability to afford the costs attributable to a regulatory requirement, because comparing compliance costs to revenues provides a reasonable indication of the magnitude of the regulatory burden relative to a commonly available measure of economic activity. Where regulatory costs represent a small fraction of a typical entity's revenues, the financial impacts of the regulation on such entities may be considered as not significant. For non-profit organizations, impacts were measured by comparing rule costs to annual expenditures. When expenditure data were not available, however, revenue information was used as a proxy for expenditures. It is appropriate to calculate the impact ratios using annualized costs, because these costs are more representative of the continuing costs entities face to comply with the rule.

EPA estimates that there are an average of 189,000 small entities that would be affected by the renovation, repair, and painting activities program. Of these, there are an estimated 165,000 small businesses with an average impact of 0.7%, 17,000 small non-profits with an average impact of 0.1%, and 6,000 small governments with an average impact of 0.004%. These estimates are based on an average cost of approximately \$35 per renovation.

4. *Relevant Federal rules.* The requirements in this rulemaking will fit within an existing framework of other Federal regulations that

address lead-based paint. The Pre-Renovation Education Rule, discussed in Unit II.A.2. of this preamble, requires renovators to distribute a lead hazard information pamphlet to owners and occupants before conducting a renovation in target housing. This rule has been carefully crafted to harmonize with the existing pre-renovation education requirements.

Disposal of waste from renovation projects that would be regulated by this rule is covered by the Resource Conservation and Recovery Act (RCRA) regulations for solid waste. This rule does not contain specific requirements for the disposal of waste from renovations.

HUD has extensive regulations that address the conduct of interim controls, as well as other lead-based paint activities, in federally assisted housing. Some of HUD's interim controls are regulated under this rule as renovations, depending upon whether the particular interim control measure disturbs more than the threshold amount of paint. In most cases, the HUD regulations are comparable to, or more stringent than this rule. In general, persons performing HUD-regulated interim controls must have taken a course in lead-safe work practices, which is also a requirement of this rule. However, this rule does not require dust clearance testing, a process required by HUD after interim control activities that disturb more than a minimal amount of lead-based paint.

Finally, OSHA's Lead Exposure in Construction standard covers potential worker exposures to lead during many construction activities, including renovation, repair, and painting activities. Although this standard may cover many of the same projects as this final rule, the requirements themselves do not overlap. The OSHA rule addresses the protection of the worker, this EPA rule principally addresses the protection of the building occupants, particularly children under age 6 and pregnant women.

5. *Skills needed for compliance.* This rule establishes requirements for training renovators, other renovation workers, and dust sampling technicians; certifying renovators, dust sampling technicians, and entities engaged in renovation, repair, and painting activities; accrediting providers of renovation and dust sampling technician training; and for renovation work practices. Renovators and dust sampling technicians would have to take a course to learn the proper techniques for accomplishing the tasks they will perform during renovations. These courses are intended to provide them with the information they would need to comply with the rule based on the skills they already have. Renovators would then provide on-the-job training in work practices to any other renovation workers used on a particular renovation. They would also need to document the work they have done during renovation. This does not require any special skills. Renovation firms would be required to apply for certification to perform renovations; this process does not require any special skills other than the ability to complete the application. Training providers must be

knowledgeable about delivering technical training. Training providers would be required to apply for accreditation to offer renovator and dust sampling technician courses. They would also be required to provide prior notification of such courses and provide information on the students trained after each such course. Completing the accreditation application and providing the required notification information does not require any special skills.

6. *Small Business Advocacy Review Panel.* Since the earliest stages of planning for this regulation under section 402(c)(3) of TSCA, EPA has been concerned with potential small entity impacts. EPA conducted outreach to small entities, and, in 1999, convened a Small Business Advocacy Review (SBAR) Panel to obtain advice and recommendations of representatives of the small entities that would potentially be subject to this regulation's requirements. At that time, EPA was planning an initial regulation that would apply to renovations in target housing, with requirements for public and commercial building renovations, including child-occupied facility renovations, to follow at a later date. The small entity representatives (SERs) chosen for consultation reflect that initial emphasis. They included maintenance and renovation contractors, painting and decorating contractors, multi-family housing owners and operators, training providers/consultants, and representatives from several national contractor associations, the National Multi-Housing Council, and the National Association of Home Builders. After considering the existing Lead-based Paint Activities Regulations, and taking into account preliminary stakeholder feedback, EPA identified eight key elements of a potential renovation and remodeling regulation for the SBAR Panel's consideration. These elements were:

- Applicability and scope.
- Firm certification.
- Individual training and certification.
- Accreditation of training courses.
- Work practice standards.
- Prohibited practices.
- Exterior clearance.
- Interior clearance.

EPA also developed several options for each of these key elements. Although the scope and applicability options specifically presented to the SBAR Panel covered only target housing, background information presented to the SERs and to the SBAR Panel members shows that EPA was also considering a regulation covering child-occupied facilities. The 2007 Supplemental Proposal (Ref. 15) extended the potentially

regulated universe to include child-occupied facilities. When the 2007 Supplemental Proposal was issued, EPA conducted a targeted mailing campaign to specifically solicit input on the rule from child-occupied facilities, such as child care providers and kindergartens, in public or commercial buildings. More information on the SBAR Panel, its recommendations, and how EPA implemented them in the development of the program, is provided in Unit VIII.C.6. of the preamble to the 2006 Proposal (Ref. 3).

7. *Alternatives considered.* The following is a discussion of significant alternatives to the rule, originated by EPA or by commenters, that could affect the economic impacts of the rule on small entities. These alternatives would have applied to both small and large entities, but, given the large number of small entities in the industry, these alternatives would primarily affect small entities. For the reasons described below, these alternatives are not consistent with the objectives of the rule.

a. *Applicability and scope.* EPA considered a number of options for the scope and applicability of the rule: include all pre-1978 housing, all pre-1978 rental housing, all pre-1960 housing, and all pre-1960 rental housing. Although the scope and applicability options specifically presented to the SBAR Panel covered only target housing, background information presented to the SERs and to the SBAR Panel members shows that EPA was also considering a regulation covering child-occupied facilities.

The SBAR Panel recommended that EPA request public comment in the proposal on the option of limiting the housing stock affected by the rule to that constructed prior to 1960, as well as the option of covering all pre-1978 housing and other options that may help to reduce costs while achieving the protection of public health. EPA asked for comment in the proposed rule on alternative scope options, including an option limited to buildings constructed prior to 1960. After considering the public comments, EPA has determined that limiting the rule to exclude buildings constructed on or after 1960 is not consistent with the stated objectives of the rule, in part because this would not protect children under the age of 6 and pregnant women.

b. *Staged approach.* EPA proposed a staged approach that would initially address renovations in pre-1960 target housing and child-occupied facilities, or where a child had an increased blood-lead level. EPA requested comment about whether to delay implementation for post-1960 target housing and child-occupied facilities for 1 year. Most commenters objected to the phased implementation, expressing concerns about adding complexity to implementation and about potential exposures to children in buildings built between 1960 and 1978 during the first year. After reviewing the comments, EPA determined the reduced burdens of a staged approach did not outweigh the complexity that it added to implementation.

c. *Exclude categories of contractors or renovation activities.* EPA requested comment on whether to exclude any categories of specialty contractors and whether certain renovation activities should be specifically included or excluded. In response, no commenter offered any data to show that any category of contractor or type of renovation activity should be exempt because they do not create lead-based paint hazards. All of the renovation activities in the Dust Study and the other studies in the record for the rule created lead-based paint hazards. EPA determined that it had no basis on which to exempt any category of contractor or type of renovation. However, some small jobs will be exempt from the requirements of the rule under the minor maintenance exception.

d. *Prohibited practices.* The current abatement regulations in 40 CFR part 745, subpart L prohibit the following work practices during abatement projects: Open-flame burning or torching, machine sanding or grinding, abrasive blasting or sandblasting, dry scraping of large areas, and operating a heat gun in excess of 1100 degrees Fahrenheit. EPA presented four options to the SBAR Panel on this topic: prohibit these practices during renovations; allow dry scraping and exterior flame-burning or torching; allow dry scraping and interior and exterior flame-burning or torching; or allow all of these practices. The SBAR Panel recognized industry concerns over the feasibility of prohibiting these practices, especially when no cost-effective alternatives exist. The SBAR Panel was also concerned about the potential risks associated with these practices, but noted that reasonable training, performance, containment, and clean-up requirements may adequately address these risks.

EPA followed the SBAR Panel's recommendation and requested public comment on the cost, benefit, and feasibility of prohibiting certain work practices. In response to its request for comment in the proposed rule, the Agency received information on techniques including benign strippers, steam stripping, closed planing with vacuums, infrared removal, and chemical stripping. Therefore, EPA believes that there are cost-effective alternatives to these prohibited or restricted practices. In addition, the Dust Study (*Characterization of Dust Lead Levels after Renovation, Repair, and Painting Activities*) found that most practices prohibited or restricted under EPA's Lead-based Paint Activities Regulations produce large quantities of lead dust, and that the use of the proposed work practices were not effective at containing or removing dust-lead hazards from the work area.

EPA has concluded that these practices should be prohibited or restricted during renovation, repair, and painting activities that disturb lead-based paint because the work practices in the rule are not effective at containing the spread of leaded dust when these practices are used, or at cleaning up lead-based paint hazards created by these practices. Thus, the work practices are not effective at minimizing exposure to

lead-based paint hazards created during renovation activities when these activities are used.

e. *HEPA vacuums.* The proposed rule required the use of a HEPA vacuum as part of the work practice standards for renovation activities. One commenter stated that EPA did not have sufficient evidence showing that HEPA vacuums are significantly better at removing lead dust than non-HEPA vacuums. EPA has determined that the weight of the evidence provided by the studies it reviewed demonstrates that the HEPA vacuums consistently removed significant quantities of lead-based paint dust and reduced lead loadings to lower levels than did other vacuums. While there may be some vacuums cleaners that are as effective as HEPA vacuums, EPA has not been able to define quantitatively the specific attributes of those vacuums. That is, EPA is not able to identify what criteria should be used to identify vacuums that are equivalent to HEPA vacuums in performance. Thus, EPA does not believe that it can identify in the final rule what types of vacuums can be used as substitutes for HEPA-vacuums. Therefore, EPA has not adopted this alternative.

f. *Visual inspection in lieu of cleaning verification.* EPA requested comment on whether cleaning verification is necessary given the cleaning required by the rule. Some commenters contended that a visual inspection following cleaning after a renovation is sufficient to ensure the lead-based paint dust generated by a renovation has been sufficiently cleaned-up. EPA disagrees with those commenters who requested that the work practices in the final rule not include any verification beyond visual inspection. The weight of the evidence clearly demonstrates that visual inspection following cleaning after a renovation is insufficient at detecting dust-lead hazards, even at levels significantly above the regulatory hazard standards. Further, EPA disagrees with the implication that easily visible paint chips and splinters are necessarily the primary materials generated during a renovation. EPA studies, including the Dust Study, show that renovation activities generate dust as well as chips and splinters. Therefore, EPA has not adopted this alternative.

8. *Significant issues raised by comments on the Initial Regulatory Flexibility Analysis.* A commenter requested that the plumbing-heating-cooling industry be exempted from the rule, claiming that the rule is impractical for the industry. The commenter did not provide any supporting data as to why the rule is impractical for the plumbing-heating-cooling industry, or any data indicating that renovations conducted by plumbing, heating, or cooling contractors do not create lead hazards. By contrast, EPA's Dust Study indicated that cutting open drywall (an activity often performed by plumbing, heating, and cooling contractors) can create a lead hazard. Therefore, EPA believes that plumbing, heating, and cooling contractors who disturb more than an exempt amount of lead-based paint can create lead hazards. EPA does

not believe that there is a factual basis for exempting this, or any other, industry from the rule.

Another commenter stated that EPA's proposed rule gave little deference to HUD's rules, and thus is inconsistent with the Regulatory Flexibility Act's requirements to fit new rules within the framework of existing Federal regulations. The commenter stated that EPA's rule needed to give greater deference to the framework established in HUD's rules (especially HUD's requirements for independent clearance examinations and its prohibition of dangerous work practices), and to clearly explain how the Renovation, Repair and Painting Rule will interface with HUD's rules to avoid confusion.

Regarding HUD's requirements for independent clearance examinations, EPA's final rule clarifies that dust clearance sampling is allowed in lieu of post-renovation cleaning verification in cases where another Federal, State, Territorial, Tribal, or local regulation requires dust clearance testing and requires the renovation firm to clean the work area until it passes clearance. This would apply to HUD-regulated renovations. Regarding the prohibition of dangerous work practices, EPA's final rule prohibits the use of the following work practices during regulated renovations: Open flame burning or torching of lead-based paint; the use of machines that remove lead-based paint through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting unless such machines are used with HEPA exhaust control; and operating a heat gun above 1100 degrees Fahrenheit. EPA believes that the provisions in the final rule provide an appropriate measure of consistency with other regulatory programs (including HUD's), and will cause minimal disruption for renovation firms.

One commenter contended that EPA said that "[n]one of the housing authorities identified in section 8.2.1 as operating public housing that does not receive HUD funding qualifies as a small government under the Regulatory Flexibility Act." According to the commenter, public housing authorities are government entities, and hundreds of them are located in and are part of communities with a population of less than 50,000.

EPA's small entity analysis was not claiming that no small governments operate housing authorities, but that they would not be significantly impacted by the rule. EPA's reasoning was as follows:

- The only public housing authorities that EPA could identify that do not receive HUD funds are operated by Massachusetts, New York, Hawaii, Connecticut, and New York City;
- Massachusetts, New York, Hawaii, Connecticut, and New York City have populations over 50,000 and thus do not qualify as small governments;

- (3) To the best of EPA's knowledge, governments with populations under 50,000 that operate public housing authorities all receive HUD funds; and
- Public housing that receives funding from HUD already must comply with HUD regulations regarding lead paint and so are not likely to incur significant additional costs due to this rule.

The commenter has offered no factual information to dispute this reasoning. Therefore, the Agency believes its conclusions regarding public housing authorities operated by small governments were appropriate.

A commenter stated that the proposed rule will have a significant impact on small businesses, and that EPA's own economic analysis of this rule finds that residential property managers and lessors of residential real estate will bear the largest share of costs in association with the rule. EPA disagrees with the commenter's claim that residential property managers and lessors of residential real estate will bear the largest share of costs in association with the rule. EPA analyzed small business impacts by estimating the average cost impact ratio for each industry, calculated as the average annual compliance cost as a percentage of average annual revenues. The average cost impact ratio for lessors of real estate is below the average cost impact ratio for all small businesses under the rule. And while the average cost impact ratio for residential property managers is above the average cost impact ratio for all small businesses under the rule, small residential property managers make up approximately 3% of the small entities impacted by the rule. Therefore, it is not accurate to claim that residential property managers and lessors of residential real estate will bear the largest share of costs in association with the rule.

Another commenter stated that given the lack of evidence showing that HEPA vacuums are significantly better at removing lead dust from floors, and because HEPA vacuums are significantly more costly than non-HEPA units, EPA should modify its proposed rule to allow cleanup with either a HEPA or non-HEPA vacuum. According to the commenter, doing so would reduce the cost to small entities in the renovation and lead mitigation businesses without compromising the level of lead dust clearance achieved by the standard.

EPA disagrees that it should modify its proposed rule to allow cleanup with a non-HEPA vacuum. EPA has determined that the weight of the evidence provided by various studies demonstrate that the HEPA vacuums consistently removed significant quantities of lead-based paint dust and reduced lead loadings to lower levels than did other vacuums. While there may be some vacuums that are as effective as HEPA vacuums, EPA has not been able to define quantitatively the specific attributes of those vacuums. That is, EPA is not able to identify what criteria should be used to identify vacuums that are equivalent to HEPA

vacuums in performance. Thus, EPA does not believe that it can identify what types of vacuums can be used as substitutes for HEPA-vacuums. EPA also notes that non-HEPA vacuums that perform as well as HEPA vacuums may not be less expensive than HEPA vacuums. For these reasons, EPA has determined that modifying its proposed rule to allow cleanup with non-HEPA vacuums would compromise the level of lead dust clearance achieved by the standard, and might not result in meaningful cost reductions.

As required by section 212 of SBREFA, EPA also is preparing a Small Entity Compliance Guide to help small entities comply with this rule. Before the date that this rule's requirements take effect for training providers, renovation firms, and renovators, the guide will be available on EPA's website at <http://www.epa.gov/lead> or from the National Lead Information Center by calling 1-800-424-LEAD (5323).

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 1 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 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.

Under UMRA Title II, EPA has determined that this rule contains a Federal mandate that may result in expenditures that exceed the inflation-adjusted UMRA threshold of \$100 million by the private sector in any 1 year, but it will not result in such expenditures by State, local,

and Tribal governments in the aggregate. Accordingly, EPA has prepared a written statement under section 202 of UMRA which has been placed in the public docket for this rulemaking and is summarized here.

1. *Authorizing legislation.* This rule is issued under the authority of TSCA sections 402(c)(3), 404, 406, and 407, 15 U.S.C. 2682(c)(3), 2684, 2686, and 2687.

2. *Cost-benefit analysis.* EPA has prepared an analysis of the costs and benefits associated with this rulemaking, a copy of which is available in the docket for this rulemaking (Ref. 24). The Economic Analysis presents the costs of the rule as well as various regulatory options and is summarized in Unit III.A. of this preamble. EPA has estimated that the total annualized costs of this rulemaking are approximately \$400 million per year using either a 3% or a 7% discount rate, and that benefits are approximately \$700 to \$1,700 million per year using a 3% discount rate and \$700 to \$1,800 million per year using a 7% discount.

3. *State, local, and Tribal government input.* EPA has sought input from State, local and Tribal government representatives throughout the development of the renovation, repair, and painting program. EPA's experience in administering the existing lead-based paint activities program under TSCA section 402(a) suggests that these governments will play a critical role in the successful implementation of a national program to reduce exposures to lead-based paint hazards associated with renovation, repair, and painting activities. Consequently, as discussed in Unit III.C.2. of the preamble to the 2006 Proposal (Ref. 3), the Agency has met with State, local, and Tribal government officials on numerous occasions to discuss renovation issues.

4. *Least burdensome option.* EPA considered a wide variety of options for addressing the risks presented by renovation activities where lead-based paint is present. As part of the development of the renovation, repair, and painting program, EPA has considered different options for the scope of the rule, various combinations of training and certification requirements for individuals who perform renovations, various combinations of work practice requirements, and various methods for ensuring that no lead-based paint hazards are left behind by persons performing renovations. The Economic Analysis analyzed several different options for the scope of the rule. Additional information on the options considered is available in Unit VIII.C.6. of the preamble for the 2006 Proposal (Ref. 3), and in the Economic Analysis (Ref. 24). EPA has determined that the preferred option is the least burdensome option available that achieves the primary objective of this rule, which is to minimize exposure to lead-based paint hazards created during renovation, repair, and painting activities in housing where children under age 6 reside and where a pregnant woman resides and in housing or other buildings frequented by children under age 6.

This rule does not contain a significant Federal intergovernmental mandate as described by section 203 of UMRA. Based on the definition of “small government jurisdiction” in RFA section 601, no State governments can be considered small. Small Territorial or Tribal governments may apply for authorization to administer and enforce this program, which would entail costs, but these small jurisdictions are under no obligation to do so.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. Small governments operate schools that are child-occupied facilities. EPA generally measures a significant impact under UMRA as being expenditures, in the aggregate, of more than 1% of small government revenues in any 1 year. As explained in Unit III.C.3., the rule is expected to result in small government impacts well under 1% of revenues. So EPA has determined that the rule does not significantly affect small governments. Nor does the rule uniquely affect small governments, as the rule is not targeted at small governments, does not primarily affect small governments, and does not impose a different burden on small governments than on other entities that operate child-occupied facilities.

E. Federalism

Pursuant to Executive Order 13132, entitled “Federalism” (64 FR 43255, August 10, 1999), EPA has determined that this rule does not have “federalism implications,” because 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. Thus, Executive Order 13132 does not apply to this rule. States would be able to apply for, and receive authorization to administer these requirements, but would be under no obligation to do so. In the absence of a State authorization, EPA will administer these requirements. Nevertheless, in the spirit of the objectives of this Executive Order, and consistent with EPA policy to promote communications between the Agency and State and local governments, EPA has consulted with representatives of State and local governments in developing the renovation, repair, and painting program. These consultations are as described in the preamble to the 2006 Proposal (Ref. 3).

F. Tribal Implications

As required by Executive Order 13175, entitled *Consultation and Coordination with Indian Tribal Governments* (59 FR 22951, November 9, 2000), EPA has determined that this rule does not have tribal implications because it will not have substantial direct effects on tribal governments, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in the

Order. Tribes would be able to apply for, and receive authorization to administer these requirements on Tribal lands, but Tribes would be under no obligation to do so. In the absence of a Tribal authorization, EPA will administer these requirements. While Tribes may operate child-occupied facilities covered by the rule such as kindergartens, pre-kindergartens, and day care facilities, EPA has determined that this rule would not have substantial direct effects on the Tribal governments that operate these facilities.

Thus, Executive Order 13175 does not apply to this rule. Although Executive Order 13175 does not apply to this rule, EPA consulted with Tribal officials and others by discussing potential renovation regulatory options for the renovation, repair, and painting program at several national lead program meetings hosted by EPA and other interested Federal agencies.

G. Children's Health Protection

Executive Order 13045, entitled *Protection of Children from Environmental Health Risks and Safety Risks* (62 FR 19885, April 23, 1997) applies to this rule because it is an “economically significant regulatory action” as defined by Executive Order 12866, and because the environmental health or safety risk addressed by this action may have a disproportionate effect on children. Accordingly, EPA has evaluated the environmental health or safety effects of renovation, repair, and painting projects on children. Various aspects of this evaluation are discussed in the preamble to the 2006 Proposal (Ref. 3).

The primary purpose of this rule is to minimize exposure to lead-based paint hazards created during renovation, repair, and painting activities in housing where children under age 6 reside and in housing or other buildings frequented by children under age 6. In the absence of this regulation, adequate work practices are not likely to be employed during renovation, repair, and painting activities. EPA's analysis indicates that there will be approximately 1.4 million children under age 6 affected by the rule. These children are projected to receive considerable benefits due to this regulation.

H. Energy Effects

This rule is not a “significant energy action” as defined in Executive Order 13211, entitled *Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use* (66 FR 28355, May 22, 2001) because it is not likely to have any adverse effect on the supply, distribution, or use of energy.

I. Technology Standards

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104–113, 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with

applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. In the 2006 Proposal, EPA proposed to adopt a number of work practice requirements that could be considered technical standards for performing renovation projects in residences that contain lead-based paint. As discussed in Unit VIII.I. of the 2006 Proposal, EPA identified two potentially applicable voluntary consensus standards (Ref. 3 at 1626). ASTM International (formerly the American Society for Testing and Materials) has developed two potentially applicable documents: “Standard Practice for Clearance Examinations Following Lead Hazard Reduction Activities in Single-Family Dwellings and Child-Occupied Facilities” (Ref. 50), and “Standard Guide for Evaluation, Management, and Control of Lead Hazards in Facilities” (Ref. 51). With respect to the first document, EPA did not propose to require traditional clearance examinations, including dust sampling, following renovation projects. However, EPA did propose to require that a visual inspection for dust, debris, and residue be conducted after cleaning and before post-renovation cleaning verification is performed. The first ASTM document does contain information on conducting a visual inspection before collecting dust clearance samples. The second ASTM document is a comprehensive guide to identifying and controlling lead-based paint hazards. Some of the information in this document is relevant to the work practices required by the rule. Each of these ASTM documents represents state-of-the-art knowledge regarding the performance of these particular aspects of lead-based paint hazard evaluation and control practices and EPA continues to recommend the use of these documents where appropriate. However, because each of these documents is extremely detailed and encompasses many circumstances beyond the scope of this rulemaking, EPA determined that it would be impractical to incorporate these voluntary consensus standards into the rule.

In addition, this final rule contains performance standards and a process for recognizing test kits that may be used by certified renovators to determine whether components to be affected by a renovation contain lead-based paint. EPA will recognize those kits that meet certain performance standards for limited false positives and negatives. EPA will also recognize only those kits that have been properly validated by a laboratory independent of the kit manufacturer. For most kits, this will mean participating in EPA’s Environmental Technology Verification (ETV) program. With stakeholder input, EPA is adapting a voluntary consensus standard, ASTM’s “Standard Practice for Evaluating the Performance Characteristics of Qualitative Chemical Spot Test Kits for Lead in Paint” (Ref. 28), for use as a testing protocol

to determine whether a particular kit has met the performance standards established in this final rule.

J. Environmental Justice

Executive Order 12898 (59 FR 7629 (February 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has assessed the potential impact of this rule on minority and low-income populations. The results of this assessment are presented in the Economic Analysis, which is available in the public docket for this rulemaking (Ref. 24). As a result of this assessment, the Agency has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

VI. 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. EPA will submit a report containing this rule 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 rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is a “major rule” as defined by 5 U.S.C. 804(2). This rule is effective [*insert date 60 days after date of publication in the Federal Register*].

List of Subjects in 40 CFR Part 745

Environmental protection, Child-occupied facility, Housing renovation, Lead, Lead-based paint, Renovation, Reporting and recordkeeping requirements.

Dated: MAR 31 2008

A handwritten signature in black ink, appearing to be "A. L. J.", written over a horizontal line.

Administrator.

■ Therefore, 40 CFR chapter I is amended as follows:

PART 745—[AMENDED]

■ 1. The authority citation for part 745 continues to read as follows:

Authority: 15 U.S.C. 2605, 2607, 2681-2692 and 42 U.S.C. 4852d.

■ 2. Section 745.80 is revised to read as follows:

§ 745.80 Purpose.

This subpart contains regulations developed under sections 402 and 406 of the Toxic Substances Control Act (15 U.S.C. 2682 and 2686) and applies to all renovations performed for compensation in target housing and child-occupied facilities. The purpose of this subpart is to ensure the following:

(a) Owners and occupants of target housing and child-occupied facilities receive information on lead-based paint hazards before these renovations begin; and

(b) Individuals performing renovations regulated in accordance with § 745.82 are properly trained; renovators and firms performing these renovations are certified; and the work practices in § 745.85 are followed during these renovations.

■ 3. Section 745.81 is revised to read as follows:

§ 745.81 Effective dates.

(a) *Training, certification and accreditation requirements and work practice standards.* The training, certification and accreditation requirements and work practice standards in this subpart are applicable in any State or Indian Tribal area that does not have a renovation program that is authorized under subpart Q of this part. The training, certification and accreditation requirements and work practice standards in this subpart will become effective as follows:

(1) *Training programs.* Effective [*insert date 60 days after date of publication in the **Federal Register***], no training program may provide, offer, or claim to provide training or refresher training for EPA certification as a renovator or a dust sampling technician without accreditation from EPA under § 745.225. Training programs may apply for accreditation under § 745.225 beginning [*insert date 1 year after date of publication in the **Federal Register***].

(2) *Firms.* (i) Firms may apply for certification under § 745.89 beginning [*insert date 18 months after date of publication in the **Federal Register***].

(ii) On or after [*insert date 2 years after date of publication in the **Federal Register***], no firm may perform, offer, or claim to perform renovations without certification from EPA under § 745.89 in target

housing or child-occupied facilities, unless the renovation qualifies for one of the exceptions identified in § 745.82(a) or (c).

(3) *Individuals*. On or after [*insert date 2 years after date of publication in the **Federal Register***], all renovations must be directed by renovators certified in accordance with § 745.90(a) and performed by certified renovators or individuals trained in accordance with § 745.90(b)(2) in target housing or child-occupied facilities, unless the renovation qualifies for one of the exceptions identified in § 745.82(a) or (c).

(4) *Work practices*. On or after [*insert date 2 years after date of publication in the **Federal Register***], all renovations must be performed in accordance with the work practice standards in § 745.85 and the associated recordkeeping requirements in § 745.86(b)(6) and (b)(7) in target housing or child-occupied facilities, unless the renovation qualifies for one of the exceptions identified in § 745.82(a) or (c).

(5) The suspension and revocation provisions in § 745.91 are effective [*insert date 2 years after date of publication in the **Federal Register***].

(b) *Renovation-specific pamphlet*. Before [*insert date 8 months after date of publication in the **Federal Register***], renovators or firms performing renovations in States and Indian Tribal areas without an authorized program may provide owners and occupants with either of the following EPA pamphlets: *Protect Your Family From Lead in Your Home* or *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools*. After that date, *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools* must be used exclusively.

(c) *Pre-Renovation Education Rule*. With the exception of the requirement to use the pamphlet entitled *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools*, the provisions of the Pre-Renovation Education Rule in this subpart have been in effect since June 1999.

■ 4. Section 745.82 is revised to read as follows:

§ 745.82 Applicability.

(a) This subpart applies to all renovations performed for compensation in target housing and child-occupied facilities, except for the following:

(1) Renovations in target housing or child-occupied facilities in which a written determination has been made by an inspector or risk assessor (certified pursuant to either Federal regulations at § 745.226 or a State or Tribal certification program authorized pursuant to § 745.324) that the components affected by the renovation are free of paint or other surface coatings that contain lead equal to or in excess of 1.0

milligrams/per square centimeter (mg/cm²) or 0.5% by weight, where the firm performing the renovation has obtained a copy of the determination.

(2) Renovations in target housing or child-occupied facilities in which a certified renovator, using an EPA recognized test kit as defined in § 745.83 and following the kit manufacturer's instructions, has tested each component affected by the renovation and determined that the components are free of paint or other surface coatings that contain lead equal to or in excess of 1.0 mg/cm² or 0.5% by weight. If the components make up an integrated whole, such as the individual stair treads and risers of a single staircase, the renovator is required to test only one of the individual components, unless the individual components appear to have been repainted or refinished separately.

(b) The information distribution requirements in § 745.84 do not apply to emergency renovations, which are renovation activities that were not planned but result from a sudden, unexpected event (such as non-routine failures of equipment) that, if not immediately attended to, presents a safety or public health hazard, or threatens equipment and/or property with significant damage. Interim controls performed in response to an elevated blood lead level in a resident child are also emergency renovations. Emergency renovations other than interim controls are also exempt from the warning sign, containment, waste handling, training, and certification requirements in §§ 745.85, 745.89, and 745.90 to the extent necessary to respond to the emergency. Emergency renovations are not exempt from the cleaning requirements of § 745.85(a)(5), which must be performed by certified renovators or individuals trained in accordance with § 745.90(b)(2), the cleaning verification requirements of § 745.85(b), which must be performed by certified renovators, and the recordkeeping requirements of § 745.86(b)(6) and (b)(7).

(c) The training requirements in § 745.90 and the work practice standards for renovation activities in § 745.85 apply to all renovations covered by this subpart, except for renovations in target housing for which the firm performing the renovation has obtained a statement signed by the owner that the renovation will occur in the owner's residence, no child under age 6 resides there, no pregnant woman resides there, the housing is not a child-occupied facility, and the owner acknowledges that the renovation firm will not be required to use the work practices contained in EPA's renovation, repair, and painting rule. For the purposes of this section, a child resides in the primary residence of his or her custodial parents, legal guardians, and foster parents. A child also resides in the primary residence of an informal caretaker if the child lives and sleeps most of the time at the caretaker's residence.

■ 5. Section 745.83 is amended as follows:

■ a. Remove the definitions of "Emergency renovation operations" and

"Multi-family housing."

■ b. Revise the definition of “Pamphlet” and the definition of “Renovator.”

■ c. Add 14 definitions in alphabetical order.

§ 745.83 Definitions.

* * * * *

Child-occupied facility means a building, or portion of a building, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least two different days within any week (Sunday through Saturday period), provided that each day’s visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may include, but are not limited to, day care centers, preschools and kindergarten classrooms. Child-occupied facilities may be located in target housing or in public or commercial buildings. With respect to common areas in public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only those common areas that are routinely used by children under age 6, such as restrooms and cafeterias. Common areas that children under age 6 only pass through, such as hallways, stairways, and garages are not included. In addition, with respect to exteriors of public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only the exterior sides of the building that are immediately adjacent to the child-occupied facility or the common areas routinely used by children under age 6.

Cleaning verification card means a card developed and distributed, or otherwise approved, by EPA for the purpose of determining, through comparison of wet and dry disposable cleaning cloths with the card, whether post-renovation cleaning has been properly completed.

Component or building component means specific design or structural elements or fixtures of a building or residential dwelling that are distinguished from each other by form, function, and location. These include, but are not limited to, interior components such as: Ceilings, crown molding, walls, chair rails, doors, door trim, floors, fireplaces, radiators and other heating units, shelves, shelf supports, stair treads, stair risers, stair stringers, newel posts, railing caps, balustrades, windows and trim (including sashes, window heads, jambs, sills or stools and troughs), built in cabinets, columns, beams, bathroom vanities, counter tops, and air conditioners; and exterior components such as: Painted roofing, chimneys, flashing, gutters and downspouts, ceilings, soffits, fascias, rake boards, cornerboards, bulkheads, doors and door trim, fences, floors, joists, lattice work, railings and railing caps, siding, handrails, stair risers and treads, stair stringers, columns, balustrades, windowsills or stools and troughs, casings, sashes and wells, and air conditioners.

Dry disposable cleaning cloth means a commercially available dry, electrostatically charged, white disposable cloth designed to be used for cleaning hard surfaces such as uncarpeted floors or counter tops.

* * * * *

Firm means a company, partnership, corporation, sole proprietorship or individual doing business, association, or other business entity; a Federal, State, Tribal, or local government agency; or a nonprofit organization.

HEPA vacuum means a vacuum cleaner which has been designed with a high-efficiency particulate air (HEPA) filter as the last filtration stage. A HEPA filter is a filter that is capable of capturing particles of 0.3 microns with 99.97% efficiency. The vacuum cleaner must be designed so that all the air drawn into the machine is expelled through the HEPA filter with none of the air leaking past it.

Interim controls means a set of measures designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards, including specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring of lead-based paint hazards or potential hazards, and the establishment and operation of management and resident education programs.

Minor repair and maintenance activities are activities, including minor heating, ventilation or air conditioning work, electrical work, and plumbing, that disrupt 6 square feet or less of painted surface per room for interior activities or 20 square feet or less of painted surface for exterior activities where none of the work practices prohibited or restricted by § 745.85(a)(3) are used and where the work does not involve window replacement or demolition of painted surface areas. When removing painted components, or portions of painted components, the entire surface area removed is the amount of painted surface disturbed. Jobs, other than emergency renovations, performed in the same room within the same 30 days must be considered the same job for the purpose of determining whether the job is a minor repair and maintenance activity.

* * * * *

Pamphlet means the EPA pamphlet titled *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools* developed under section 406(a) of TSCA for use in complying with section 406(b) of TSCA, or any State or Tribal pamphlet approved by EPA pursuant to 40 CFR 745.326 that is developed for the same purpose. This includes reproductions of the pamphlet when copied in full and without revision or deletion of material from the pamphlet (except for the addition or revision of State or local sources of information). Before [*insert date 8 months after date of publication in the Federal Register*], the term “pamphlet” also means any pamphlet

developed by EPA under section 406(a) of TSCA or any State or Tribal pamphlet approved by EPA pursuant to § 745.326.

* * * * *

Recognized test kit means a commercially available kit recognized by EPA under § 745.88 as being capable of allowing a user to determine the presence of lead at levels equal to or in excess of 1.0 milligrams per square centimeter, or more than 0.5% lead by weight, in a paint chip, paint powder, or painted surface.

Renovation means the modification of any existing structure, or portion thereof, that results in the disturbance of painted surfaces, unless that activity is performed as part of an abatement as defined by this part (40 CFR 745.223). The term renovation includes (but is not limited to): The removal, modification or repair of painted surfaces or painted components (e.g., modification of painted doors, surface restoration, window repair, surface preparation activity (such as sanding, scraping, or other such activities that may generate paint dust)); the removal of building components (e.g., walls, ceilings, plumbing, windows); weatherization projects (e.g., cutting holes in painted surfaces to install blown-in insulation or to gain access to attics, planing thresholds to install weather-stripping), and interim controls that disturb painted surfaces. A renovation performed for the purpose of converting a building, or part of a building, into target housing or a child-occupied facility is a renovation under this subpart. The term renovation does not include minor repair and maintenance activities.

Renovator means an individual who either performs or directs workers who perform renovations. A certified renovator is a renovator who has successfully completed a renovator course accredited by EPA or an EPA-authorized State or Tribal program.

Training hour means at least 50 minutes of actual learning, including, but not limited to, time devoted to lecture, learning activities, small group activities, demonstrations, evaluations, and hands-on experience.

Wet disposable cleaning cloth means a commercially available, pre-moistened white disposable cloth designed to be used for cleaning hard surfaces such as uncarpeted floors or counter tops.

Wet mopping system means a device with the following characteristics: A long handle, a mop head designed to be used with disposable absorbent cleaning pads, a reservoir for cleaning solution, and a built-in mechanism for distributing or spraying the cleaning solution onto a floor, or a method of equivalent efficacy.

Work area means the area that the certified renovator establishes to contain the dust and debris generated by a renovation.

§ 745.84 [Removed]

■ 6. Section 745.84 is removed.

§ 745.85 [Redesignated]

■ 7. Section 745.85 is redesignated as § 745.84.

■ 8. Newly designated § 745.84 is amended as follows:

■ a. Revise the introductory text of paragraph (a) and revise paragraph (a)(2)(i).

■ b. Revise the introductory text of paragraph (b) and revise paragraphs (b)(2) and (b)(4).

■ c. Redesignate paragraph (c) as paragraph (d).

■ d. Add a new paragraph (c).

■ e. Revise the introductory text of newly designated paragraph (d).

§ 745.84 Information distribution requirements.

(a) *Renovations in dwelling units.* No more than 60 days before beginning renovation activities in any residential dwelling unit of target housing, the firm performing the renovation must:

* * * * *
(2) * * *

(i) Obtain, from the adult occupant, a written acknowledgment that the occupant has received the pamphlet; or certify in writing that a pamphlet has been delivered to the dwelling and that the firm performing the renovation has been unsuccessful in obtaining a written acknowledgment from an adult occupant. Such certification must include the address of the unit undergoing renovation, the date and method of delivery of the pamphlet, names of the persons delivering the pamphlet, reason for lack of acknowledgment (e.g., occupant refuses to sign, no adult occupant available), the signature of a representative of the firm performing the renovation, and the date of signature.

* * * * *

(b) *Renovations in common areas.* No more than 60 days before beginning renovation activities in common areas of multi-unit target housing, the firm performing the renovation must:

* * * * *

(2) *Comply with one of the following.* (i) Notify in writing, or ensure written notification of, each affected unit and make the pamphlet available upon request prior to the start of renovation. Such notification shall be accomplished by distributing written notice to each affected

unit. The notice shall describe the general nature and locations of the planned renovation activities; the expected starting and ending dates; and a statement of how the occupant can obtain the pamphlet, at no charge, from the firm performing the renovation, or

(ii) While the renovation is ongoing, post informational signs describing the general nature and locations of the renovation and the anticipated completion date. These signs must be posted in areas where they are likely to be seen by the occupants of all of the affected units. The signs must be accompanied by a posted copy of the pamphlet or information on how interested occupants can review a copy of the pamphlet or obtain a copy from the renovation firm at no cost to occupants.

* * * * *

(4) If the scope, locations, or expected starting and ending dates of the planned renovation activities change after the initial notification, and the firm provided written initial notification to each affected unit, the firm performing the renovation must provide further written notification to the owners and occupants providing revised information on the ongoing or planned activities. This subsequent notification must be provided before the firm performing the renovation initiates work beyond that which was described in the original notice.

(c) *Renovations in child-occupied facilities.* No more than 60 days before beginning renovation activities in any child-occupied facility, the firm performing the renovation must:

(1)(i) Provide the owner of the building with the pamphlet, and comply with one of the following:

(A) Obtain, from the owner, a written acknowledgment that the owner has received the pamphlet.

(B) Obtain a certificate of mailing at least 7 days prior to the renovation.

(ii) If the child-occupied facility is not the owner of the building, provide an adult representative of the child-occupied facility with the pamphlet, and comply with one of the following:

(A) Obtain, from the adult representative, a written acknowledgment that the adult representative has received the pamphlet; or certify in writing that a pamphlet has been delivered to the facility and that the firm performing the renovation has been unsuccessful in obtaining a written acknowledgment from an adult representative. Such certification must include the address of the child-occupied facility undergoing renovation, the date and method of delivery of the pamphlet, names of the persons delivering the pamphlet, reason for lack of acknowledgment (e.g., representative refuses to sign),

the signature of a representative of the firm performing the renovation, and the date of signature.

(B) Obtain a certificate of mailing at least 7 days prior to the renovation.

(2) Provide the parents and guardians of children using the child-occupied facility with the pamphlet and information describing the general nature and locations of the renovation and the anticipated completion date by complying with one of the following:

(i) Mail or hand-deliver the pamphlet and the renovation information to each parent or guardian of a child using the child-occupied facility.

(ii) While the renovation is ongoing, post informational signs describing the general nature and locations of the renovation and the anticipated completion date. These signs must be posted in areas where they can be seen by the parents or guardians of the children frequenting the child-occupied facility. The signs must be accompanied by a posted copy of the pamphlet or information on how interested parents or guardians can review a copy of the pamphlet or obtain a copy from the renovation firm at no cost to the parents or guardians.

(3) The renovation firm must prepare, sign, and date a statement describing the steps performed to notify all parents and guardians of the intended renovation activities and to provide the pamphlet.

(d) *Written acknowledgment.* The written acknowledgments required by paragraphs (a)(1)(i), (a)(2)(i), (b)(1)(i), (c)(1)(i)(A), and (c)(1)(ii)(A) of this section must:

* * * * *

■ 9. Section 745.85 is added to subpart E to read as follows:

§ 745.85 Work practice standards.

(a) *Standards for renovation activities.* Renovations must be performed by certified firms using certified renovators as directed in § 745.89. The responsibilities of certified firms are set forth in § 745.89(d) and the responsibilities of certified renovators are set forth in § 745.90(b).

(1) *Occupant protection.* Firms must post signs clearly defining the work area and warning occupants and other persons not involved in renovation activities to remain outside of the work area. To the extent practicable, these signs must be in the primary language of the occupants. These signs must be posted before beginning the renovation and must remain in place and readable until the renovation and the post-renovation cleaning verification have been completed. If warning signs have been posted in accordance with 24 CFR 35.1345(b)(2) or 29 CFR 1926.62(m), additional signs are not required by this section.

(2) *Containing the work area.* Before beginning the renovation, the firm must isolate the work area so that no dust or debris leaves the work area while the renovation is being performed. In addition, the firm must maintain the integrity of the containment by ensuring that any plastic or other impermeable materials are not torn or displaced, and taking any other steps necessary to ensure that no dust or debris leaves the work area while the renovation is being performed. The firm must also ensure that containment is installed in such a manner that it does not interfere with occupant and worker egress in an emergency.

(i) *Interior renovations.* The firm must:

(A) Remove all objects from the work area, including furniture, rugs, and window coverings, or cover them with plastic sheeting or other impermeable material with all seams and edges taped or otherwise sealed.

(B) Close and cover all ducts opening in the work area with taped-down plastic sheeting or other impermeable material.

(C) Close windows and doors in the work area. Doors must be covered with plastic sheeting or other impermeable material. Doors used as an entrance to the work area must be covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area.

(D) Cover the floor surface, including installed carpet, with taped-down plastic sheeting or other impermeable material in the work area 6 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to contain the dust, whichever is greater.

(E) Use precautions to ensure that all personnel, tools, and other items, including the exteriors of containers of waste, are free of dust and debris before leaving the work area.

(ii) *Exterior renovations.* The firm must:

(A) Close all doors and windows within 20 feet of the renovation. On multi-story buildings, close all doors and windows within 20 feet of the renovation on the same floor as the renovation, and close all doors and windows on all floors below that are the same horizontal distance from the renovation.

(B) Ensure that doors within the work area that will be used while the job is being performed are covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area.

(C) Cover the ground with plastic sheeting or other disposable impermeable material extending 10 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to collect falling

paint debris, whichever is greater, unless the property line prevents 10 feet of such ground covering.

(D) In certain situations, the renovation firm must take extra precautions in containing the work area to ensure that dust and debris from the renovation does not contaminate other buildings or other areas of the property or migrate to adjacent properties.

(3) *Prohibited and restricted practices.* The work practices listed below shall be prohibited or restricted during a renovation as follows:

(i) Open-flame burning or torching of lead-based paint is prohibited;

(ii) The use of machines that remove lead-based paint through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting, is prohibited unless such machines are used with HEPA exhaust control; and

(iii) Operating a heat gun on lead-based paint is permitted only at temperatures below 1100 degrees Fahrenheit.

(4) *Waste from renovations*—(i) Waste from renovation activities must be contained to prevent releases of dust and debris before the waste is removed from the work area for storage or disposal. If a chute is used to remove waste from the work area, it must be covered.

(ii) At the conclusion of each work day and at the conclusion of the renovation, waste that has been collected from renovation activities must be stored under containment, in an enclosure, or behind a barrier that prevents release of dust and debris out of the work area and prevents access to dust and debris.

(iii) When the firm transports waste from renovation activities, the firm must contain the waste to prevent release of dust and debris.

(5) *Cleaning the work area.* After the renovation has been completed, the firm must clean the work area until no dust, debris or residue remains.

(i) *Interior and exterior renovations.* The firm must:

(A) Collect all paint chips and debris and, without dispersing any of it, seal this material in a heavy-duty bag.

(B) Remove the protective sheeting. Mist the sheeting before folding it, fold the dirty side inward, and either tape shut to seal or seal in heavy-duty bags. Sheeting used to isolate contaminated rooms from non-contaminated rooms must remain in place until after the cleaning and removal of other sheeting. Dispose of the sheeting as waste.

(ii) *Additional cleaning for interior renovations.* The firm must clean all objects and surfaces in the work area and within 2 feet of the work area in the following manner, cleaning from higher to lower:

(A) *Walls.* Clean walls starting at the ceiling and working down to the floor by either vacuuming with a HEPA vacuum or wiping with a damp cloth.

(B) *Remaining surfaces.* Thoroughly vacuum all remaining surfaces and objects in the work area, including furniture and fixtures, with a HEPA vacuum. The HEPA vacuum must be equipped with a beater bar when vacuuming carpets and rugs.

(C) Wipe all remaining surfaces and objects in the work area, except for carpeted or upholstered surfaces, with a damp cloth. Mop uncarpeted floors thoroughly, using a mopping method that keeps the wash water separate from the rinse water, such as the 2-bucket mopping method, or using a wet mopping system.

(b) *Standards for post-renovation cleaning verification—(1) Interiors.* (i) A certified renovator must perform a visual inspection to determine whether dust, debris or residue is still present. If dust, debris or residue is present, these conditions must be removed by re-cleaning and another visual inspection must be performed.

(ii) After a successful visual inspection, a certified renovator must:

(A) Verify that each windowsill in the work area has been adequately cleaned, using the following procedure.

(1) Wipe the windowsill with a wet disposable cleaning cloth that is damp to the touch. If the cloth matches or is lighter than the cleaning verification card, the windowsill has been adequately cleaned.

(2) If the cloth does not match and is darker than the cleaning verification card, re-clean the windowsill as directed in paragraphs (a)(5)(ii)(B) and (a)(5)(ii)(C) of this section, then either use a new cloth or fold the used cloth in such a way that an unused surface is exposed, and wipe the surface again. If the cloth matches or is lighter than the cleaning verification card, that windowsill has been adequately cleaned.

(3) If the cloth does not match and is darker than the cleaning verification card, clean that windowsill again as directed in paragraphs (a)(5)(ii)(B) and (a)(5)(ii)(C) of this section and wait for 1 hour or until the surface has dried completely, whichever is longer.

(4) After waiting for the windowsill to dry, wipe the windowsill with a dry disposable cleaning cloth. After this wipe, the windowsill has been adequately cleaned.

(B) Wipe uncarpeted floors and countertops within the work area with a wet disposable cleaning cloth. Floors must be wiped using an

application device with a long handle and a head to which the cloth is attached. The cloth must remain damp at all times while it is being used to wipe the surface for post-renovation cleaning verification. If the surface within the work area is greater than 40 square feet, the surface within the work area must be divided into roughly equal sections that are each less than 40 square feet. Wipe each such section separately with a new wet disposable cleaning cloth. If the cloth used to wipe each section of the surface within the work area matches the cleaning verification card, the surface has been adequately cleaned.

(1) If the cloth used to wipe a particular surface section does not match the cleaning verification card, re-clean that section of the surface as directed in paragraphs (a)(5)(ii)(B) and (a)(5)(ii)(C) of this section, then use a new wet disposable cleaning cloth to wipe that section again. If the cloth matches the cleaning verification card, that section of the surface has been adequately cleaned.

(2) If the cloth used to wipe a particular surface section does not match the cleaning verification card after the surface has been re-cleaned, clean that section of the surface again as directed in paragraphs (a)(5)(ii)(B) and (a)(5)(ii)(C) of this section and wait for 1 hour or until the entire surface within the work area has dried completely, whichever is longer.

(3) After waiting for the entire surface within the work area to dry, wipe each section of the surface that has not yet achieved post-renovation cleaning verification with a dry disposable cleaning cloth. After this wipe, that section of the surface has been adequately cleaned.

(iii) When the work area passes the post-renovation cleaning verification, remove the warning signs.

(2) *Exteriors.* A certified renovator must perform a visual inspection to determine whether dust, debris or residue is still present on surfaces in and below the work area, including windowsills and the ground. If dust, debris or residue is present, these conditions must be eliminated and another visual inspection must be performed. When the area passes the visual inspection, remove the warning signs.

(c) *Optional dust clearance testing.* Cleaning verification need not be performed if the contract between the renovation firm and the person contracting for the renovation or another Federal, State, Territorial, Tribal, or local law or regulation requires:

(1) The renovation firm to perform dust clearance sampling at the conclusion of a renovation covered by this subpart.

(2) The dust clearance samples are required to be collected by a certified inspector, risk assessor or dust sampling technician.

(3) The renovation firm is required to re-clean the work area until the dust clearance sample results are below the clearance standards in

§ 745.227(e)(8) or any applicable State, Territorial, Tribal, or local standard.

(d) *Activities conducted after post-renovation cleaning verification.* Activities that do not disturb paint, such as applying paint to walls that have already been prepared, are not regulated by this subpart if they are conducted after post-renovation cleaning verification has been performed.

■ 10. Section 745.86 is revised to read as follows:

§ 745.86 Recordkeeping and reporting requirements.

(a) Firms performing renovations must retain and, if requested, make available to EPA all records necessary to demonstrate compliance with this subpart for a period of 3 years following completion of the renovation. This 3-year retention requirement does not supersede longer obligations required by other provisions for retaining the same documentation, including any applicable State or Tribal laws or regulations.

(b) Records that must be retained pursuant to paragraph (a) of this section shall include (where applicable):

(1) Reports certifying that a determination had been made by an inspector (certified pursuant to either Federal regulations at § 745.226 or an EPA-authorized State or Tribal certification program) that lead-based paint is not present on the components affected by the renovation, as described in § 745.82(b)(1).

(2) Signed and dated acknowledgments of receipt as described in § 745.84(a)(1)(i), (a)(2)(i), (b)(1)(i), (c)(1)(i)(A), and (c)(1)(ii)(A).

(3) Certifications of attempted delivery as described in § 745.84(a)(2)(i) and (c)(1)(ii)(A).

(4) Certificates of mailing as described in § 745.84(a)(1)(ii), (a)(2)(ii), (b)(1)(ii), (c)(1)(i)(B), and (c)(1)(ii)(B).

(5) Records of notification activities performed regarding common area renovations, as described in § 745.84(b)(3) and (4), and renovations in child-occupied facilities, as described in § 745.84(c)(2).

(6) Any signed and dated statements received from owner-occupants documenting that the requirements of § 745.85 do not apply. These statements must include a declaration that the renovation will occur in the owner's residence, a declaration that no children under age 6 reside there, a declaration that no pregnant woman resides there, a declaration that the housing is not a child-occupied facility, the address of the unit undergoing renovation, the owner's name, an acknowledgment by the owner that the work practices to be used during the renovation will not necessarily include all of the lead-safe work practices contained in EPA's renovation, repair, and painting rule, the

signature of the owner, and the date of signature. These statements must be written in the same language as the text of the renovation contract, if any.

(7) Documentation of compliance with the requirements of § 745.85, including documentation that a certified renovator was assigned to the project, that the certified renovator provided on-the-job training for workers used on the project, that the certified renovator performed or directed workers who performed all of the tasks described in § 745.85(a), and that the certified renovator performed the post-renovation cleaning verification described in § 745.85(b). If the renovation firm was unable to comply with all of the requirements of this rule due to an emergency as defined in § 745.82, the firm must document the nature of the emergency and the provisions of the rule that were not followed. This documentation must include a copy of the certified renovator's training certificate, and a certification by the certified renovator assigned to the project that:

(i) Training was provided to workers (topics must be identified for each worker).

(ii) Warning signs were posted at the entrances to the work area.

(iii) If test kits were used, that the specified brand of kits was used at the specified locations and that the results were as specified.

(iv) The work area was contained by:

(A) Removing or covering all objects in the work area (interiors).

(B) Closing and covering all HVAC ducts in the work area (interiors).

(C) Closing all windows in the work area (interiors) or closing all windows in and within 20 feet of the work area (exteriors).

(D) Closing and sealing all doors in the work area (interiors) or closing and sealing all doors in and within 20 feet of the work area (exteriors).

(E) Covering doors in the work area that were being used to allow passage but prevent spread of dust.

(F) Covering the floor surface, including installed carpet, with taped-down plastic sheeting or other impermeable material in the work area 6 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to contain the dust, whichever is greater (interiors) or covering the ground with plastic sheeting or other disposable impermeable material anchored to the building extending 10 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to collect falling paint debris, whichever is greater, unless the

property line prevents 10 feet of such ground covering, weighted down by heavy objects (exteriors);

(G) Installing (if necessary) vertical containment to prevent migration of dust and debris to adjacent property (exteriors).

(v) Waste was contained on-site and while being transported off-site.

(vi) The work area was properly cleaned after the renovation by:

(A) Picking up all chips and debris, misting protective sheeting, folding it dirty side inward, and taping it for removal.

(B) Cleaning the work area surfaces and objects using a HEPA vacuum and/or wet cloths or mops (interiors).

(vii) The certified renovator performed the post-renovation cleaning verification (the results of which must be briefly described, including the number of wet and dry cloths used).

(c) When test kits are used, the renovation firm must, within 30 days of the completion of the renovation, provide identifying information as to the manufacturer and model of the test kits used, a description of the components that were tested including their locations, and the test kit results to the person who contracted for the renovation.

(d) If dust clearance sampling is performed in lieu of cleaning verification as permitted by § 745.85(c), the renovation firm must provide, within 30 days of the completion of the renovation, a copy of the dust sampling report to the person who contracted for the renovation.

■ 11. Section 745.87 is amended by revising paragraph (e) to read as follows:

§ 745.87 Enforcement and inspections.

* * * * *

(e) Lead-based paint is assumed to be present at renovations covered by this subpart. EPA may conduct inspections and issue subpoenas pursuant to the provisions of TSCA section 11 (15 U.S.C. 2610) to ensure compliance with this subpart.

■ 12. Section 745.88 is revised to read as follows:

§ 745.88 Recognized test kits.

(a) Effective [*insert date 60 days after date of publication in the Federal Register*], EPA recognizes the test kits that have been determined by National Institute of Standards and Technology research to meet the negative response criteria described in paragraph (c)(1) of

this section. This recognition will last until EPA publicizes its recognition of the first test kit that meets both the negative response and positive response criteria in paragraph (c) of this section.

(b) No other test kits will be recognized until they are tested through EPA's Environmental Technology Verification Program or other equivalent EPA approved testing program.

(1) Effective September 1, 2008, to initiate the testing process, a test kit manufacturer must submit a sufficient number of kits, along with the instructions for using the kits, to EPA. The test kit manufacturer should first visit the following website for information on where to apply: <http://www.epa.gov/etv/howtoapply.html>.

(2) After the kit has been tested through the Environmental Technology Verification Program or other equivalent approved EPA testing program, EPA will review the report to determine whether the required criteria have been met.

(3) Before September 1, 2008, test kits must meet only the negative response criteria in paragraph (c)(1) of this section. The recognition of kits that meet only this criteria will last until EPA publicizes its recognition of the first test kits that meets both of the criteria in paragraph (c) of this section.

(4) After September 1, 2008, test kits must meet both of the criteria in paragraph (c) of this section.

(5) If the report demonstrates that the kit meets the required criteria, EPA will issue a notice of recognition to the kit manufacturer, provide them with the report, and post the information on EPA's website.

(6) If the report demonstrates that the kit does not meet the required criteria, EPA will notify the kit manufacturer and provide them with the report.

(c) *Response criteria*—(1) *Negative response criteria*. For paint containing lead at or above the regulated level, 1.0 mg/cm² or 0.5% by weight, a demonstrated probability (with 95% confidence) of a negative response less than or equal to 5% of the time.

(2) *Positive response criteria*. For paint containing lead below the regulated level, 1.0 mg/cm² or 0.5% by weight, a demonstrated probability (with 95% confidence) of a positive response less than or equal to 10% of the time.

■ 13. Section 745.89 is added to subpart E to read as follows:

§ 745.89 Firm certification.

(a) *Initial certification*. (1) Firms that perform renovations for compensation must apply to EPA for certification to perform renovations or dust sampling. To apply, a firm must submit to EPA a

completed “Application for Firms,” signed by an authorized agent of the firm, and pay at least the correct amount of fees. If a firm pays more than the correct amount of fees, EPA will reimburse the firm for the excess amount.

(2) After EPA receives a firm’s application, EPA will take one of the following actions within 90 days of the date the application is received:

(i) EPA will approve a firm’s application if EPA determines that it is complete and that the environmental compliance history of the firm, its principals, or its key employees does not show an unwillingness or inability to maintain compliance with environmental statutes or regulations. An application is complete if it contains all of the information requested on the form and includes at least the correct amount of fees. When EPA approves a firm’s application, EPA will issue the firm a certificate with an expiration date not more than 5 years from the date the application is approved. EPA certification allows the firm to perform renovations covered by this section in any State or Indian Tribal area that does not have a renovation program that is authorized under subpart Q of this part.

(ii) EPA will request a firm to supplement its application if EPA determines that the application is incomplete. If EPA requests a firm to supplement its application, the firm must submit the requested information or pay the additional fees within 30 days of the date of the request.

(iii) EPA will not approve a firm’s application if the firm does not supplement its application in accordance with paragraph (a)(2)(ii) of this section or if EPA determines that the environmental compliance history of the firm, its principals, or its key employees demonstrates an unwillingness or inability to maintain compliance with environmental statutes or regulations. EPA will send the firm a letter giving the reason for not approving the application. EPA will not refund the application fees. A firm may reapply for certification at any time by filing a new, complete application that includes the correct amount of fees.

(b) *Re-certification.* To maintain its certification, a firm must be re-certified by EPA every 5 years.

(1) *Timely and complete application.* To be re-certified, a firm must submit a complete application for re-certification. A complete application for re-certification includes a completed “Application for Firms” which contains all of the information requested by the form and is signed by an authorized agent of the firm, noting on the form that it is submitted as a re-certification. A complete application must also include at least the correct amount of fees. If a firm pays more than the correct amount of fees, EPA will reimburse the firm for the excess amount.

(i) An application for re-certification is timely if it is postmarked 90 days or more before the date the firm's current certification expires. If the firm's application is complete and timely, the firm's current certification will remain in effect until its expiration date or until EPA has made a final decision to approve or disapprove the re-certification application, whichever is later.

(ii) If the firm submits a complete re-certification application less than 90 days before its current certification expires, and EPA does not approve the application before the expiration date, the firm's current certification will expire and the firm will not be able to conduct renovations until EPA approves its re-certification application.

(iii) If the firm fails to obtain recertification before the firm's current certification expires, the firm must not perform renovations or dust sampling until it is certified anew pursuant to paragraph (a) of this section.

(2) *EPA action on an application.* After EPA receives a firm's application for re-certification, EPA will review the application and take one of the following actions within 90 days of receipt:

(i) EPA will approve a firm's application if EPA determines that it is timely and complete and that the environmental compliance history of the firm, its principals, or its key employees does not show an unwillingness or inability to maintain compliance with environmental statutes or regulations. When EPA approves a firm's application for re-certification, EPA will issue the firm a new certificate with an expiration date 5 years from the date that the firm's current certification expires. EPA certification allows the firm to perform renovations or dust sampling covered by this section in any State or Indian Tribal area that does not have a renovation program that is authorized under subpart Q of this part.

(ii) EPA will request a firm to supplement its application if EPA determines that the application is incomplete.

(iii) EPA will not approve a firm's application if it is not received or is not complete as of the date that the firm's current certification expires, or if EPA determines that the environmental compliance history of the firm, its principals, or its key employees demonstrates an unwillingness or inability to maintain compliance with environmental statutes or regulations. EPA will send the firm a letter giving the reason for not approving the application. EPA will not refund the application fees. A firm may reapply for certification at any time by filing a new application and paying the correct amount of fees.

(c) *Amendment of certification.* A firm must amend its certification within 90 days of the date a change occurs to information included in the firm's most recent application. If the firm fails to amend its certification within 90 days of the date the change occurs, the firm may

not perform renovations or dust sampling until its certification is amended.

(1) To amend a certification, a firm must submit a completed “Application for Firms,” signed by an authorized agent of the firm, noting on the form that it is submitted as an amendment and indicating the information that has changed. The firm must also pay at least the correct amount of fees.

(2) If additional information is needed to process the amendment, or the firm did not pay the correct amount of fees, EPA will request the firm to submit the necessary information or fees. The firm’s certification is not amended until the firm complies with the request.

(3) Amending a certification does not affect the certification expiration date.

(d) *Firm responsibilities.* Firms performing renovations must ensure that:

(1) All individuals performing renovation activities on behalf of the firm are either certified renovators or have been trained by a certified renovator in accordance with § 745.90.

(2) A certified renovator is assigned to each renovation performed by the firm and discharges all of the certified renovator responsibilities identified in § 745.90.

(3) All renovations performed by the firm are performed in accordance with the work practice standards in § 745.85.

(4) The pre-renovation education requirements of § 745.84 have been performed.

(5) The recordkeeping requirements of § 745.86 are met.

■ 14. Section 745.90 is added to subpart E to read as follows:

§ 745.90 Renovator certification and dust sampling technician certification.

(a) *Renovator certification and dust sampling technician certification.* (1) To become a certified renovator or certified dust sampling technician, an individual must successfully complete the appropriate course accredited by EPA under § 745.225 or by a State or Tribal program that is authorized under subpart Q of this part. The course completion certificate serves as proof of certification. EPA renovator certification allows the certified individual to perform renovations covered by this section in any State or Indian Tribal area that does not have a renovation program that is authorized under subpart Q of this part. EPA dust sampling technician certification allows the certified individual to perform dust clearance sampling

under § 745.85(c) in any State or Indian Tribal area that does not have a renovation program that is authorized under subpart Q of this part.

(2) Individuals who have successfully completed an accredited abatement worker or supervisor course, or individuals who have successfully completed an EPA, HUD, or EPA/HUD model renovation training course may take an accredited refresher renovator training course in lieu of the initial renovator training course to become a certified renovator.

(3) Individuals who have successfully completed an accredited lead-based paint inspector or risk assessor course may take an accredited refresher dust sampling technician course in lieu of the initial training to become a certified dust sampling technician.

(4) To maintain renovator certification or dust sampling technician certification, an individual must complete a renovator or dust sampling technician refresher course accredited by EPA under § 745.225 or by a State or Tribal program that is authorized under subpart Q of this part within 5 years of the date the individual completed the initial course described in paragraph (a)(1) of this section. If the individual does not complete a refresher course within this time, the individual must re-take the initial course to become certified again.

(b) *Renovator responsibilities.* Certified renovators are responsible for ensuring compliance with § 745.85 at all renovations to which they are assigned. A certified renovator:

(1) Must perform all of the tasks described in § 745.85(b) and must either perform or direct workers who perform all of the tasks described in § 745.85(a).

(2) Must provide training to workers on the work practices they will be using in performing their assigned tasks.

(3) Must be physically present at the work site when the signs required by § 745.85(a)(1) are posted, while the work area containment required by § 745.85(a)(2) is being established, and while the work area cleaning required by § 745.85(a)(5) is performed.

(4) Must regularly direct work being performed by other individuals to ensure that the work practices are being followed, including maintaining the integrity of the containment barriers and ensuring that dust or debris does not spread beyond the work area.

(5) Must be available, either on-site or by telephone, at all times that renovations are being conducted.

(6) When requested by the party contracting for renovation services, must use an acceptable test kit to determine whether components to be affected by the renovation contain lead-based paint.

(7) Must have with them at the work site copies of their initial course completion certificate and their most recent refresher course completion certificate.

(8) Must prepare the records required by § 745.86(b)(7).

(c) *Dust sampling technician responsibilities.* When performing optional dust clearance sampling under § 745.85(c), a certified dust sampling technician:

(1) Must collect dust samples in accordance with § 745.227(e)(8), must send the collected samples to a laboratory recognized by EPA under TSCA section 405(b), and must compare the results to the clearance levels in accordance with § 745.227(e)(8).

(2) Must have with them at the work site copies of their initial course completion certificate and their most recent refresher course completion certificate.

■ 15. Section 745.91 is added to subpart E to read as follows:

§ 745.91 Suspending, revoking, or modifying an individual's or firm's certification.

(a)(1) *Grounds for suspending, revoking, or modifying an individual's certification.* EPA may suspend, revoke, or modify an individual's certification if the individual fails to comply with Federal lead-based paint statutes or regulations. EPA may also suspend, revoke, or modify a certified renovator's certification if the renovator fails to ensure that all assigned renovations comply with § 745.85. In addition to an administrative or judicial finding of violation, execution of a consent agreement in settlement of an enforcement action constitutes, for purposes of this section, evidence of a failure to comply with relevant statutes or regulations.

(2) *Grounds for suspending, revoking, or modifying a firm's certification.* EPA may suspend, revoke, or modify a firm's certification if the firm:

(i) Submits false or misleading information to EPA in its application for certification or re-certification.

(ii) Fails to maintain or falsifies records required in § 745.86.

(iii) Fails to comply, or an individual performing a renovation on behalf of the firm fails to comply, with Federal lead-based paint statutes or regulations. In addition to an administrative or judicial finding of violation, execution of a consent agreement in settlement of an enforcement action constitutes, for purposes of this section, evidence of a failure to comply with relevant statutes or regulations.

(b) *Process for suspending, revoking, or modifying certification.* (1) Prior to taking action to suspend, revoke, or modify an individual's or

firm's certification, EPA will notify the affected entity in writing of the following:

(i) The legal and factual basis for the proposed suspension, revocation, or modification.

(ii) The anticipated commencement date and duration of the suspension, revocation, or modification.

(iii) Actions, if any, which the affected entity may take to avoid suspension, revocation, or modification, or to receive certification in the future.

(iv) The opportunity and method for requesting a hearing prior to final suspension, revocation, or modification.

(2) If an individual or firm requests a hearing, EPA will:

(i) Provide the affected entity an opportunity to offer written statements in response to EPA's assertions of the legal and factual basis for its proposed action.

(ii) Appoint an impartial official of EPA as Presiding Officer to conduct the hearing.

(3) The Presiding Officer will:

(i) Conduct a fair, orderly, and impartial hearing within 90 days of the request for a hearing.

(ii) Consider all relevant evidence, explanation, comment, and argument submitted.

(iii) Notify the affected entity in writing within 90 days of completion of the hearing of his or her decision and order. Such an order is a final agency action which may be subject to judicial review. The order must contain the commencement date and duration of the suspension, revocation, or modification.

(4) If EPA determines that the public health, interest, or welfare warrants immediate action to suspend the certification of any individual or firm prior to the opportunity for a hearing, it will:

(i) Notify the affected entity in accordance with paragraph (b)(1)(i) through (b)(1)(iii) of this section, explaining why it is necessary to suspend the entity's certification before an opportunity for a hearing.

(ii) Notify the affected entity of its right to request a hearing on the immediate suspension within 15 days of the suspension taking place and the procedures for the conduct of such a hearing.

(5) Any notice, decision, or order issued by EPA under this section, any transcript or other verbatim record of oral testimony, and any

documents filed by a certified individual or firm in a hearing under this section will be available to the public, except as otherwise provided by section 14 of TSCA or by part 2 of this title. Any such hearing at which oral testimony is presented will be open to the public, except that the Presiding Officer may exclude the public to the extent necessary to allow presentation of information which may be entitled to confidential treatment under section 14 of TSCA or part 2 of this title.

(6) EPA will maintain a publicly available list of entities whose certification has been suspended, revoked, modified, or reinstated.

(7) Unless the decision and order issued under paragraph (b)(3)(iii) of this section specify otherwise:

(i) An individual whose certification has been suspended must take a refresher training course (renovator or dust sampling technician) in order to make his or her certification current.

(ii) An individual whose certification has been revoked must take an initial renovator or dust sampling technician course in order to become certified again.

(iii) A firm whose certification has been revoked must reapply for certification after the revocation ends in order to become certified again. If the firm's certification has been suspended and the suspension ends less than 5 years after the firm was initially certified or re-certified, the firm does not need to do anything to re-activate its certification.

■ 16. Section 745.220 is amended by revising paragraph (a) to read as follows:

§ 745.220 Scope and applicability.

(a) This subpart contains procedures and requirements for the accreditation of training programs for lead-based paint activities and renovations, procedures and requirements for the certification of individuals and firms engaged in lead-based paint activities, and work practice standards for performing such activities. This subpart also requires that, except as discussed below, all lead-based paint activities, as defined in this subpart, be performed by certified individuals and firms.

* * * * *

■ 17. Section 745.225 is amended as follows:

■ a. Revise paragraph (a).

■ b. Revise the introductory text of paragraph (b), revise paragraph (b)(1)(ii), and add paragraph (b)(1)(iv)(C).

- c. Revise the introductory text of paragraph (c), add paragraphs (c)(6)(vi), (c)(6)(vii), and (c)(8)(vi), and revise paragraphs (c)(8)(iv) and (c)(10).
- d. Amend paragraph (c)(13) by replacing the phrase “lead-based paint activities” with the phrase “renovator, dust sampling technician, or lead-based paint activities” wherever it appears in the paragraph.
- e. Add paragraphs (d)(6) and (d)(7).
- f. Revise the introductory text of paragraph (e).
- g. Amend paragraph (e)(1) by removing the word “activities” wherever it appears in the paragraph.
- h. Revise paragraph (e)(2).

§ 745.225 Accreditation of training programs; target housing and child-occupied facilities.

(a) *Scope.* (1) A training program may seek accreditation to offer courses in any of the following disciplines: Inspector, risk assessor, supervisor, project designer, abatement worker, renovator, and dust sampling technician. A training program may also seek accreditation to offer refresher courses for each of the above listed disciplines.

(2) Training programs may first apply to EPA for accreditation of their lead-based paint activities courses or refresher courses pursuant to this section on or after August 31, 1998. Training programs may first apply to EPA for accreditation of their renovator or dust sampling technician courses or refresher courses pursuant to this section on or after [*insert date 1 year after date of publication in the Federal Register*].

(3) A training program must not provide, offer, or claim to provide EPA-accredited lead-based paint activities courses without applying for and receiving accreditation from EPA as required under paragraph (b) of this section on or after March 1, 1999. A training program must not provide, offer, or claim to provide EPA-accredited renovator or dust sampling technician courses without applying for and receiving accreditation from EPA as required under paragraph (b) of this section on or after [*insert date 60 days after date of publication in the Federal Register*].

(b) *Application process.* The following are procedures a training program must follow to receive EPA accreditation to offer lead-based

paint activities courses, renovator courses, or dust sampling technician courses:

(1) * * *

(ii) A list of courses for which it is applying for accreditation. For the purposes of this section, courses taught in different languages are considered different courses, and each must independently meet the accreditation requirements.

* * * * *

(iv) * * *

(C) When applying for accreditation of a course in a language other than English, a signed statement from a qualified, independent translator that they had compared the course to the English language version and found the translation to be accurate.

* * * * *

(c) Requirements for the accreditation of training programs. For a training program to obtain accreditation from EPA to offer lead-based paint activities courses, renovator courses, or dust sampling technician courses, the program must meet the following requirements:

* * * * *

(6) * * *

(vi) The renovator course must last a minimum of 8 training hours, with a minimum of 2 hours devoted to hands-on training activities. The minimum curriculum requirements for the renovator course are contained in paragraph (d)(6) of this section. Hands-on training activities must cover renovation methods that minimize the creation of dust and lead-based paint hazards, interior and exterior containment and cleanup methods, and post-renovation cleaning verification.

(vii) The dust sampling technician course must last a minimum of 8 training hours, with a minimum of 2 hours devoted to hands-on training activities. The minimum curriculum requirements for the dust sampling technician course are contained in paragraph (d)(7) of this section. Hands-on training activities must cover dust sampling methodologies.

* * * * *

(8) * * *

(iv) For initial inspector, risk assessor, project designer, supervisor, or abatement worker course completion certificates, the expiration date of interim certification, which is 6 months from the date of course completion.

(v) For renovator and dust sampling technician course completion certificates, a photograph of the individual.

* * * * *

(vi) The language in which the course was taught.

* * * * *

(10) Courses offered by the training program must teach the work practice standards contained in § 745.85 or § 745.227, as applicable, in such a manner that trainees are provided with the knowledge needed to perform the renovations or lead-based paint activities they will be responsible for conducting.

* * * * *

(6) A digital photograph of the student.

(d) * * *

(6) *Renovator*—(i) Role and responsibility of a renovator.

(ii) Background information on lead and its adverse health effects.

(iii) Background information on EPA, HUD, OSHA, and other Federal, State, and local regulations and guidance that pertains to lead-based paint and renovation activities.

(iv) Procedures for using acceptable test kits to determine whether paint is lead-based paint.

(v) Renovation methods to minimize the creation of dust and lead-based paint hazards.

(vi) Interior and exterior containment and cleanup methods.

(vii) Methods to ensure that the renovation has been properly completed, including cleaning verification, and clearance testing.

(viii) Waste handling and disposal.

(ix) Providing on-the-job training to other workers.

(x) Record preparation.

(7) *Dust sampling technician*. (i) Role and responsibility of a dust sampling technician.

(ii) Background information on lead and its adverse health effects.

(iii) Background information on Federal, State, and local regulations and guidance that pertains to lead-based paint and renovation activities.

(iv) Dust sampling methodologies.

(v) Clearance standards and testing.

(vi) Report preparation.

* * * * *

(e) *Requirements for the accreditation of refresher training programs.* A training program may seek accreditation to offer refresher training courses in any of the following disciplines: Inspector, risk assessor, supervisor, project designer, abatement worker, renovator, and dust sampling technician. To obtain EPA accreditation to offer refresher training, a training program must meet the following minimum requirements:

* * * * *

(2) Refresher courses for inspector, risk assessor, supervisor, and abatement worker must last a minimum of 8 training hours. Refresher courses for project designer, renovator, and dust sampling technician must last a minimum of 4 training hours.

* * * * *

■ 18. Section 745.320 is amended by revising paragraph (c) to read as follows:

§ 745.320 Scope and purpose.

* * * * *

(c) A State or Indian Tribe may seek authorization to administer and enforce all of the provisions of subpart E of this part, just the pre-renovation education provisions of subpart E of this part, or just the training, certification, accreditation, and work practice provisions of subpart E of this part. The provisions of §§ 745.324 and 745.326 apply for the purposes of such program authorizations.

* * * * *

■ 19. Section 745.324 is amended as follows:

- a. Revise paragraph (a)(1).
- b. Delete the phrase “lead-based paint training accreditation and certification” from the second sentence of paragraph (b)(1)(iii).
- c. Revise paragraph (b)(2)(ii).
- d. Revise paragraphs (e)(2)(i) and (e)(4).
- e. Revise paragraph (f)(2).
- f. Revise paragraph (i)(8).

§ 745.324 Authorization of State or Tribal programs.

(a) *Application content and procedures.* (1) Any State or Indian Tribe that seeks authorization from EPA to administer and enforce the

provisions of subpart E or subpart L of this part must submit an application to the Administrator in accordance with this paragraph.

* * * * *

(b) * * *

(2) * * *

(i) * * *

(ii) An analysis of the State or Tribal program that compares the program to the Federal program in subpart E or subpart L of this part, or both. This analysis must demonstrate how the program is, in the State's or Indian Tribe's assessment, at least as protective as the elements in the Federal program at subpart E or subpart L of this part, or both. EPA will use this analysis to evaluate the protectiveness of the State or Tribal program in making its determination pursuant to paragraph (e)(2)(i) of this section.

* * * * *

(e) * * *

(2) * * *

(i) The State or Tribal program is at least as protective of human health and the environment as the corresponding Federal program under subpart E or subpart L of this part, or both; and

* * * * *

(4) If the State or Indian Tribe applies for authorization of State or Tribal programs under both subpart E and subpart L, EPA may, as appropriate, authorize one program and disapprove the other.

* * * * *

(f) * * *

(2) If a State or Indian Tribe does not have an authorized program to administer and enforce the pre-renovation education requirements of subpart E of this part by August 31, 1998, the Administrator will, by such date, enforce those provisions of subpart E of this part as the Federal program for that State or Indian Country. If a State or Indian Tribe does not have an authorized program to administer and enforce the training, certification and accreditation requirements and work practice standards of subpart E of this part by *[insert date 1 year after date of publication in the **Federal Register**]*, the Administrator will, by such date, enforce those provisions of subpart E of this part as the Federal program for that State or Indian Country.

* * * * *

(i) * * *

(8) By the date of such order, the Administrator will establish and enforce the provisions of subpart E or subpart L of this part, or both, as the Federal program for that State or Indian Country.

■ 20. Section 745.326 is revised to read as follows:

§ 745.326 Renovation: State and Tribal program requirements.

(a) *Program elements.* To receive authorization from EPA, a State or Tribal program must contain the following program elements:

(1) For pre-renovation education programs, procedures and requirements for the distribution of lead hazard information to owners and occupants of target housing and child-occupied facilities before renovations for compensation.

(2) For renovation training, certification, accreditation, and work practice standards programs:

(i) Procedures and requirements for the accreditation of renovation and dust sampling technician training programs.

(ii) Procedures and requirements for the certification of renovators and dust sampling technicians.

(iii) Procedures and requirements for the certification of individuals and/or firms.

(iv) Requirements that all renovations be conducted by appropriately certified individuals and/or firms.

(v) Work practice standards for the conduct of renovations.

(3) For all renovation programs, development of the appropriate infrastructure or government capacity to effectively carry out a State or Tribal program.

(b) *Pre-renovation education.* To be considered at least as protective as the Federal program, the State or Tribal program must:

(1) Establish clear standards for identifying renovation activities that trigger the information distribution requirements.

(2) Establish procedures for distributing the lead hazard information to owners and occupants of housing and child-occupied facilities prior to renovation activities.

(3) Require that the information to be distributed include either the pamphlet titled *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools*, developed by EPA under section 406(a) of TSCA, or an alternate pamphlet or package of lead hazard information that has been submitted by the State or Tribe, reviewed by EPA, and approved by EPA for that State or Tribe. Such information must contain renovation-specific information similar to

that in *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools*, must meet the content requirements prescribed by section 406(a) of TSCA, and must be in a format that is readable to the diverse audience of housing and child-occupied facility owners and occupants in that State or Tribe.

(i) A State or Tribe with a pre-renovation education program approved before [*insert date 60 days after date of publication in the **Federal Register***] must demonstrate that it meets the requirements of this section no later than the first report that it submits pursuant to § 745.324(h) on or after [*insert date 1 year after date of publication in the **Federal Register***].

(ii) A State or Tribe with an application for approval of a pre-renovation education program submitted but not approved before [*insert date 60 days after date of publication in the **Federal Register***] must demonstrate that it meets the requirements of this section either by amending its application or in the first report that it submits pursuant to § 745.324(h) of this part on or after [*insert date 1 year after date of publication in the **Federal Register***].

(iii) A State or Indian Tribe submitting its application for approval of a pre-renovation education program on or after [*insert date 60 days after date of publication in the **Federal Register***] must demonstrate in its application that it meets the requirements of this section.

(c) *Accreditation of training programs.* To be considered at least as protective as the Federal program, the State or Tribal program must meet the requirements of either paragraph (c)(1) or (c)(2) of this section:

(1) The State or Tribal program must establish accreditation procedures and requirements, including:

(i) Procedures and requirements for the accreditation of training programs, including, but not limited to:

(A) Training curriculum requirements.

(B) Training hour requirements.

(C) Hands-on training requirements.

(D) Trainee competency and proficiency requirements.

(E) Requirements for training program quality control.

(ii) Procedures and requirements for the re-accreditation of training programs.

(iii) Procedures for the oversight of training programs.

(iv) Procedures and standards for the suspension, revocation, or modification of training program accreditations; or

(2) The State or Tribal program must establish procedures and requirements for the acceptance of renovation training offered by training providers accredited by EPA or a State or Tribal program authorized by EPA under this subpart.

(d) *Certification of renovators.* To be considered at least as protective as the Federal program, the State or Tribal program must:

(1) Establish procedures and requirements for individual certification that ensure that certified renovators are trained by an accredited training program.

(2) Establish procedures and requirements for re-certification.

(3) Establish procedures for the suspension, revocation, or modification of certifications.

(e) *Work practice standards for renovations.* To be considered at least as protective as the Federal program, the State or Tribal program must establish standards that ensure that renovations are conducted reliably, effectively, and safely. At a minimum, the State or Tribal program must contain the following requirements:

(1) Renovations must be conducted only by certified contractors.

(2) Renovations are conducted using lead-safe work practices that are at least as protective to occupants as the requirements in § 745.85.

(3) Certified contractors must retain appropriate records.

■ 21. Section 745.327 is amended by revising paragraphs (b)(1)(iv) and (b)(2)(ii) to read as follows:

§ 745.327 State or Indian Tribal lead-based paint compliance and enforcement programs.

* * * * *

(b) * * *

(1) * * *

(iv) Requirements that regulate the conduct of renovation activities as described at § 745.326.

(2) * * *

(ii) For the purposes of enforcing a renovation program, State or Tribal officials must be able to enter a firm’s place of business or work site.

* * * * *

■ 22. Section 745.339 is revised to read as follows:

§ 745.339 Effective date.

States and Indian Tribes may seek authorization to administer and enforce subpart L of this part pursuant to this subpart at any time. States and Indian Tribes may seek authorization to administer and enforce the pre-renovation education provisions of subpart E of this part pursuant to this subpart at any time. States and Indian Tribes may seek authorization to administer and enforce all of subpart E of this part pursuant to this subpart effective [*insert date 60 days after date of publication in the* **Federal Register**].

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