

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 171

[EPA-HQ-OPP-2011-0183; FRL-9956-70]

RIN 2070-AJ20

Pesticides; Certification of Pesticide Applicators

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is updating the existing regulation concerning the certification of applicators of restricted use pesticides (RUPs) in response to public comments received on the proposal and based on extensive stakeholder review of the existing regulation and its implementation since 1974. The final revised regulation will ensure Federal certification program standards adequately protect applicators, the public, and the environment from risks associated with use of RUPs. The final rule will improve the competency of certified applicators of RUPs, increase protection for noncertified applicators using RUPs under the direct supervision of a certified applicator through enhanced pesticide safety training and standards for supervision of noncertified applicators, and establish a minimum age requirement for certified and noncertified applicators using RUPs under the direct supervision of a certified applicator. Recognizing EPA's commitment to work more closely with Tribal governments to strengthen environmental protection in Indian country, the final rule will provide more practical options for establishing certification programs in Indian country.

DATES: This final rule is effective March 6, 2017.

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA-HQ-OPP-2011-0183, is available at <http://www.regulations.gov> or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC 20460-0001. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the OPP Docket is (703) 305-5805. Please review the visitor instructions and additional information about the docket available at <http://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

I. Executive Summary

A. What is the Agency's authority for taking this action?

This action is issued under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. 136-136y, particularly sections 136a(d), 136i, and 136w.

B. What is the purpose of the regulatory action?

Applicators are at risk from exposure to RUPs they handle for their work. The public and the environment may also be at risk from misapplication of RUPs by pesticide applicators. This final rule is intended to enhance and improve the competency of certified RUP applicators and persons working under their direct supervision. EPA expects that improving the competency of certified applicators and those under their direct supervision will result in reduced occupational pesticide exposure and the reduced incidence of related illness among certified applicators, noncertified applicators working under their direct supervision, and agricultural workers. EPA also expects that improving the competency of certified applicators will help ensure that RUPs used according to their labeling do not cause unreasonable adverse effects to applicators, workers, the public, or the environment.

C. What are the major changes from the proposal to the final rule?

EPA received extensive comments from entities that administer pesticide applicator certification programs (States, Tribes, Federal agencies; referred to throughout this document as certifying authorities), organizations representing States and Tribes, university extension programs, growers and grower associations, pesticide applicators and applicator organizations, farmworker advocacy organizations, the Small Business Administration Office of Advocacy, other groups, and individual members of the public. Based on the feedback received, EPA has changed elements of the proposal in this final rule. Some of the major changes from the proposal to the final rule include:

- **Recertification.** EPA proposed establishing a maximum certification

period of 3 years. The proposal also would have required applicators to earn a specific number of continuing education units (CEUs), based on their existing certification, to maintain their certification. The proposal defined a CEU as 50 minutes of active training time. The final rule establishes a maximum recertification period of 5 years. The final rule does not require applicators to complete a specific number of CEUs or hours of training in order to maintain their certification. Rather, the final rule establishes a framework for certifying authorities to develop a recertification program within their jurisdiction. The recertification program must ensure that applicators maintain a level of competency to use RUPs without causing unreasonable adverse effects to human health and the environment. EPA will approve recertification programs as part of its review of a certifying authority's certification plan.

- **Minimum age.** EPA proposed establishing a minimum age of 18 for private and commercial applicators, as well as for noncertified applicators working under their direct supervision. The final rule establishes a minimum age of 18 for private and commercial applicators. The final rule also establishes a minimum age of 18 for noncertified applicators working under the supervision of private and commercial applicators with a limited exception; the final rule establishes a minimum age of 16 for a noncertified applicator using agricultural RUPs under the supervision of a private applicator who is a member of the noncertified applicator's immediate family, with certain restrictions. The definition of "immediate family" in the final rule matches the definition of the same term in the revised Worker Protection Standard (WPS) (40 CFR 170.305).

- **Noncertified applicator qualifications.** EPA proposed requiring noncertified applicators to qualify as competent to use RUPs under the direct supervision of a certified applicator by completing pesticide safety training covering content outlined in the proposal. The proposal also included two alternative ways to qualify—completing pesticide safety training for handlers under the WPS, which covers many noncertified applicators in agriculture, or passing the exam for commercial applicators that covers core competency (but not a category exam). The proposal would have required certifying authorities either to adopt the proposed standards for noncertified applicators or to prohibit the use of RUPs by noncertified applicators. The

final rule allows noncertified applicators to establish their competency by completing pesticide safety training covering content outlined in the rule, by completing pesticide safety training for handlers as required by the WPS, by meeting requirements established by a certifying authority that meet or exceed the standards for noncertified applicator qualifications established in the final rule, or by being a certified applicator in a category other than the category covering the supervised application.

- *Commercial applicator recordkeeping.* EPA proposed requiring commercial applicators to maintain records documenting that noncertified applicators using RUPs under their direct supervision have satisfied the training requirement. FIFRA prohibits EPA from requiring private applicators to maintain records, so EPA did not propose a similar requirement for private applicators. The final rule requires commercial applicators to maintain, verify, and have access to the records of the qualifications of noncertified applicators using RUPs under their direct supervision.

- *Categories of certification.* EPA proposed the addition of “application method-specific” categories (aerial application, soil fumigation, and non-soil fumigation) for both commercial and private applicators. The proposal would have required commercial applicators to be certified in at least one category before being eligible to obtain an application method-specific certification (*i.e.*, hold concurrent certifications in a pest control category (*e.g.*, turf and ornamental) and an application method-specific category (*e.g.*, soil fumigation). Under the proposal, private applicators would have needed to hold a valid private applicator certification in order to be eligible to obtain an application method-specific certification. EPA also proposed adding predator control categories for private and commercial

applicators, with subcategories under each covering the use of sodium cyanide dispensed through a mechanical ejection device and sodium fluoroacetate dispensed through livestock protection collars. In the final rule, EPA has added categories for both private and commercial applicators covering aerial application, soil fumigation, non-soil fumigation, the use of sodium cyanide dispensed through a mechanical ejection device, and the use of sodium fluoroacetate dispensed through livestock protection collars. These are stand-alone certification categories and do not necessarily require concurrent certification in another existing category.

- *Identification of candidates for certification and recertification.* EPA proposed requiring certifying authorities to verify the identity of persons seeking certification or recertification by checking a government-issued photo identification for each candidate. The final rule requires certifying authorities to verify the identity of persons seeking certification or recertifying by taking a written exam by checking a government-issued photo identification or by using another comparably reliable proof of identity approved by the certifying authority. The final rule requires the certifying authority have a process in place to ensure persons seeking recertification successfully complete the course objectives, which includes verifying the identity of applicators, but does not include a requirement to check a government-issued photo identification.

- *Implementation.* EPA proposed allowing certifying authorities two years from the effective date of the final rule to develop and submit a certification plan for EPA review and approval, and two years for EPA to review and approve certification plans. The proposal allowed certifying authorities that had submitted plans but had not yet received EPA approval to continue operating under their existing

certification plan until EPA issued approval of the revised certification plan. The final rule adjusts the proposed implementation timeframe to provide additional flexibility. Existing certification plans approved by EPA before the effective date of the rule will remain in effect until three years after the effective date of the final rule; if a certifying authority submits an amended certification plan to EPA for approval within three years of the effective date of the final rule, its existing certification plan will remain in effect until EPA has reviewed and responded to the amended certification plan, but no longer than two years, unless EPA authorizes further extension in its approval of an amended certification plan. In its approval of an amended certification plan, EPA will specify how much longer the existing plan may remain in effect while the certifying authority prepares to implement its amended certification plan. EPA will base each certifying authority’s implementation period on the particular circumstances of that jurisdiction and the requests from the certifying authority, but anticipates that most certifying authorities will be allowed two years from the date of EPA approval to fully implement their revised certification plans.

Other changes from the proposal to the final rule are discussed in the individual areas of the final regulatory requirements.

D. What are the incremental impacts of the final rule?

EPA has prepared an Economic Analysis of the potential impacts associated with this rulemaking (Ref. 1). This analysis, which is available in the docket, is summarized in greater detail in Unit II.C., and the following chart provides a brief outline of the costs and impacts included in the Economic Analysis.

Category	Description	Location in the economic analysis
Monetized Benefits Avoided acute pesticide incidents.	\$13.2 to \$24.3 million/year from avoided acute pesticide incidents, not adjusted for underreporting of pesticide incidents.	Chapter 4.4.
Qualitative Benefits	<ul style="list-style-type: none"> • Willingness to pay to avoid acute effects of pesticide exposure beyond cost of treatment and loss of productivity. • Reduced latent effect of avoided acute pesticide exposure. • Reduced chronic effects from lower chronic pesticide exposure to workers, handlers, and farmworker families, including a range of illnesses such as Non-Hodgkins lymphoma, prostate cancer, Parkinson’s disease, lung cancer, chronic bronchitis, and asthma. • Reduced harm to wildlife and non-target crops. 	Chapter 4.2 & 4.5.
Total Costs	\$31.3 million/year	Chapter 3.5.
Costs to Private Applicators	483,000 impacted; \$8.6 million/year; average \$25 per applicator	Chapter 3.5.
Costs to Commercial Applicators	421,000 impacted; \$16.2 million/year; average \$46 per applicator	Chapter 3.5.
Costs to States and Other Jurisdictions	68 impacted; \$6.5 million/year	Chapter 3.5.

Category	Description	Location in the economic analysis
Small Business Impacts	No significant impact on a substantial number of small entities <ul style="list-style-type: none"> • The rule may affect over 800,000 small farms that use pesticides, although about half are unlikely to apply RUPs. • Impact less than 1% of the annual revenues for the average small entity. 	Chapter 3.7.
Impact on Jobs	The rule will have a negligible effect on jobs and employment <ul style="list-style-type: none"> • Most private and commercial applicators are self-employed. • Incremental cost per applicator represents from 0.2 to 0.5 percent of the cost of a part-time employee. 	Chapter 3.6.

II. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you apply RUPs. You may also be potentially affected by this action if you are: A person who uses RUPs under the direct supervision of a certified applicator; a State, Tribe, or Federal agency who administers a certification program for pesticides applicators or a pesticide safety educator; or other person who provides pesticide safety training for pesticide applicator certification or recertification. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Agricultural Establishments (Crop Production) (NAICS code 111).
- Nursery and Tree Production (NAICS code 111421).
- Agricultural Pest Control and Pesticide Handling on Farms (NAICS code 115112).
- Crop Advisors (NAICS codes 115112, 541690, 541712).
- Agricultural (Animal) Pest Control (Livestock Spraying) (NAICS code 115210).
- Forestry Pest Control (NAICS code 115310).
- Wood Preservation Pest Control (NAICS code 321114).
- Pesticide Registrants (NAICS code 325320).
- Pesticide Dealers (NAICS codes 424690, 424910, 444220).
- Research & Demonstration Pest Control, Crop Advisor (NAICS code 541710).
- Industrial, Institutional, Structural & Health Related Pest Control (NAICS code 561710).
- Ornamental & Turf, Rights-of-Way Pest Control (NAICS code 561730).
- Environmental Protection Program Administrators (NAICS code 924110).
- Governmental Pest Control Programs (NAICS code 926140).

B. What action is the Agency taking?

The final rule revises the existing Certification of Pesticide Applicators regulation, 40 CFR part 171 (certification rule). The certification rule sets standards of competency for persons who use RUPs and establishes a framework for certifying authorities to administer pesticide applicator certification programs. The rule seeks to ensure that persons using RUPs are competent to use these products without causing unreasonable adverse effects to themselves, the public, or the environment.

The final rule takes into consideration comments received from the public in response to the proposed rule (Ref. 2), as well as additional information such as reported incidents of pesticide-related illness or injury.

EPA is revising the existing regulation to enhance the following: Private applicator competency standards, exam and training security standards, standards for noncertified applicators working under the direct supervision of a certified applicator, Tribal applicator certification, and State, Tribal, Federal agency, and EPA-administered certification plans. The final rule revises the existing regulation to add: Categories of certification for commercial and private applicators, a recertification interval and criteria for recertification programs administered by certifying authorities, and a minimum age for certified applicators and noncertified applicators using RUPs under direct supervision of certified applicators.

1. Private applicator competency standards. The final rule changes the standards of competency a private applicator must meet in order to be certified. The final rule expands the private applicator competency standards to include most of the general standards of competency for commercial applicators (also known as “core” competency), standards generally applicable to pesticide use in agriculture, and specific related regulations relevant to private applicators, such as the WPS. The final rule amends the options for determining

private applicator competency by requiring the applicator to complete a training program or to pass a written exam that covers the specific competency standards in this rule. The final rule eliminates from the existing rule the non-reader certification option, which allows certification by oral exam to use a single product.

2. Additional categories of certification for commercial applicators and private applicators. The final rule adds to the existing rule additional categories for commercial and private applicators, which certifying authorities may adopt if relevant in their jurisdiction. The final rule adds to the existing rule commercial and private certification categories for aerial application, soil fumigation, non-soil fumigation, sodium fluoroacetate dispensed through livestock protection collars, and sodium cyanide dispensed through mechanical ejection devices.

3. Recertification standards and interval. The final rule establishes a maximum recertification interval of 5 years for commercial and private applicators. The final rule requires certifying authorities to develop a recertification program to ensure that applicators continue to maintain a level of competency necessary to use RUPs without causing unreasonable adverse effects. The final rule specifies that such a recertification program may include exams and/or training.

4. Standards for noncertified applicators using RUPs under supervision. The final rule establishes requirements to ensure that noncertified applicators are competent to use RUPs under the supervision of a certified applicator. In order for noncertified applicators to use RUPs under the direct supervision of a certified applicator, they must qualify as competent under the rule. The final rule includes four options for noncertified applicator qualification: Complete specific training as outlined in the rule, satisfy the handler training requirements under the WPS, satisfy requirements adopted by the certifying authority that meet or exceed EPA’s standards for noncertified applicator qualification, or be a

currently certified applicator who is not certified to use RUPs in the category of the application. The final rule requires noncertified applicators to receive annual training or to satisfy the requirements adopted by the certifying authority as part of the certification plan.

The supervising applicator is required to verify that noncertified applicators have satisfied the necessary requirements and must have access to the records documenting that the qualification requirement has been satisfied. The final rule requires that a certified applicator supervising noncertified applicators be certified in each category relevant to the supervised application, to provide noncertified applicators access to a copy of the labeling for the RUPs used, and to ensure that a means for immediate communication between the supervising applicator and noncertified applicators under his or her direct supervision is available.

Certifying authorities have the option to adopt the standards for noncertified applicators outlined in the rule, establish alternative requirements for noncertified applicators that meet or exceed the standards in the rule, and/or prohibit the use of RUPs under the supervision of a private or commercial applicator.

5. Minimum age. The final rule requires commercial and private applicators to be at least 18 years old. The final rule requires noncertified applicators using RUPs under the direct supervision of *commercial* applicators to be at least 18 years old. The final rule requires noncertified applicators using RUPs under the direct supervision of *private* applicators to be at least 18 years old, except that those under the direct supervision of a certified private applicator who is an immediate family member must be at least 16 years old provided that certain conditions are met. The final rule includes a definition for "immediate family" that mirrors the definition in the WPS, which was revised in 2015.

6. Indian country certification. The final rule offers three options for certification for applicators in Indian country. A Tribe may choose to allow persons holding currently valid certifications issued under one or more specified State, Tribal, or Federal agency certification plans to apply RUPs within the Tribe's Indian country, develop its own certification plan for certifying private and commercial applicators, or take no action, in which case EPA may, in consultation with the Tribe(s) affected, implement an EPA-administered certification plan within

the Tribe's Indian country. EPA currently administers a Federal certification program covering Indian country not otherwise covered by a certification plan (Ref. 3) as well as a certification program specifically for Navajo Indian country (Ref. 4).

7. State, Tribal, Federal agency, and EPA-administered certification plans. The final rule updates the requirements for submission, approval, and maintenance of State, Tribal, and Federal agency certification plans. The final rule deletes the section on Government Agency Plans (GAP) and codifies existing policy on review and approval of Federal agency certification plans. The final rule updates requirements for EPA-administered plans.

C. What are the costs and benefits of the rule?

EPA estimates the total annualized cost of the rule at \$31.3 million (Ref. 1). EPA notes that these costs are the incremental costs of complying with the new requirements in the revised rule, not the total costs of administering certification programs. Certifying authorities that administer certification programs would bear annualized costs of about \$6.5 million. The upfront costs of revisions to certification plans and programs, including revising laws, regulations, and policies, developing new certification categories and updating tracking databases, are estimated to be about \$3.8 million; ongoing administration of exams or trainings for the new certification and recertification requirements would cost an estimated \$2.7 million annually. The annual cost to private applicators would be about \$8.6 million, or about \$25 per year per private applicator. The estimated annual cost to commercial applicators would be \$16.2 million, or about \$46 per commercial applicator per year. Many of the firms in the affected sectors are small businesses, particularly in the agricultural sector. EPA concludes that there would not be a significant impact on a substantial number of small entities. The impact to the average small farm is anticipated to be less than 1% of annual sales while the impacts to small commercial pest control services are expected to be around 0.1% of annual gross revenue. Given the modest increases in per-applicator costs, EPA also concludes that the final rule will not have a substantial effect on employment.

EPA acknowledges that there is uncertainty in the cost estimates. EPA's cost analysis is generally based on a conservative methodology that tends to overestimate the cost of the rule, as

explained in Chapter 3 of the Economic Analysis (Ref. 1). However, because of uncertainties in the estimation, some costs estimated in its the Economic Analysis may be underestimated. The estimated cost of \$31.3 million is the best and most reasonable estimate of the total annualized costs of the final rule. However, even if EPA has underestimated the costs or overestimated the quantified benefits of this rule, consideration of the qualitative benefits of the rule leads EPA to conclude that the total benefits would outweigh the costs. These qualitative benefits include reduced chronic illness to applicators from repeated RUP exposure, and benefits to the public from better protections from RUP exposure when occupying treated buildings or outdoor spaces, consuming treated food products, and when near areas where RUPs have been applied. The qualitative benefits also include reduced impact on water and non-target plants and animals from misapplication.

The final rule will improve the pesticide applicator certification and training program substantially. Trained and competent applicators are more likely to apply pesticide products without causing unreasonable adverse effects and to use RUPs properly to achieve the intended results than applicators who are not adequately trained or properly certified. In addition to core pesticide safety and practical use concepts, certification and training assures that applicators possess critical information on a wide range of environmental issues, such as endangered species, water quality, worker protection, and protecting non-target organisms. Pesticide safety education helps applicators improve their abilities to avoid pesticide misuse, spills, and harm to non-target organisms.

The benefits of the final rule accrue to certified and noncertified applicators, the public, and the environment. EPA estimates the quantified value of the 157 to 198 acute illnesses from RUP exposure per year that could be prevented by the rule to be between \$13.2 million and \$24.3 million per year (Ref. 1).

To arrive at the number of incidents possibly preventable by the rule, EPA reviewed pesticide incident cases reported to the Sentinel Event Notification System for Occupational Risk (SENSOR) database, maintained by the Centers for Disease Control and Prevention's National Institute for Occupational Safety and Health (NIOSH). SENSOR covers all occupational injuries and has a specific component for pesticides (SENSOR-

Pesticides). EPA evaluated incidents reported to SENSOR-Pesticides from 2008–2011 that involved a pesticide ingredient commonly associated with RUPs. EPA initially identified 478 possible unintentional cases involving RUPs, but 81 were removed from consideration, leaving 397 cases. The removed cases included incidents including soil fumigants, as well as cases not relevant to the rule. EPA removed the incidents involving soil fumigants because the Agency has implemented chemical-specific mitigation measures aimed at addressing incidents involving these products. For the remaining 397 cases, EPA was able to identify the proximate causes of the exposure causing the incident using the pesticide incident reports from SENSOR-Pesticides including with the assigned prevention codes and additional information where available, such as from California's Pesticide Illness Surveillance Program. EPA reviewed the narrative description of these cases, the information identified in the SENSOR-Pesticide database and additional information from the state if it was available for the cause of the incident, and determined whether the rule included provisions intended to prevent or mitigate such incidents. EPA categorized the incidents as "preventable", "possibly preventable," or "not preventable" based on whether they were within the intended scope of the rule. EPA's estimates of the benefits of the rule are based on the cases that were categorized as "preventable" or "possibly preventable." In order to make sure EPA was not overestimating the expected benefits of the rule, other incidents were categorized as "not preventable" if there was not enough information to determine if the incident would have been prevented by the rule changes, if compliance with the rule would not have prevented the incident, or if the incident was not relevant to the rule. EPA classified 202 incidents as "preventable", meaning there was a clear link between the application/applicator and the adverse effect, and the information demonstrated an error by the applicator or applicator incompetency that the rule is intended to prevent or mitigate. EPA classified 73 incidents as "possibly preventable", meaning there was a clear link between the application/applicator and the effect and an applicator error was possible, but the available information did not identify any specific applicator errors that the rule is intended to prevent or mitigate. EPA removed from consideration 32 incidents related to the

use of paraquat because the Agency plans to implement specific mitigation measures to address issues with the use of this product. This approach could underestimate the benefits of the rule, because the final paraquat mitigation measures are not yet known, and because preventable accidents involving paraquat are likely indicative of wider problems with RUP storage and use that may be prevented by the rule changes.

After excluding the paraquat cases, the soil fumigant cases, and the not relevant cases, there were 366 incidents determined to be relevant to the rule. The review of the SENSOR-Pesticides data identified 196 cases that were "preventable" under the changes to the rule, and another 51 cases were "possibly preventable". These cases include incidents involving RUPs that were registered by EPA at the time of the incident but have since been cancelled, because EPA believes they are indicative of the types of incidents that may occur with other RUPs, including those that may not have been registered during this time period. Accordingly, these incidents reasonably reflect the kinds of incidents expected to be mitigated by the certification rule. Given 366 incidents determined to be relevant to the rule, including those without enough information to determine whether the incident could be prevented, EPA concluded that 54 percent of RUP incidents would be preventable through the rule changes and an additional 14 percent would be possibly preventable. The changes to the rule are expected to improve applicator competency in areas reasonably expected to reduce recent RUP incidents by 54 to 68 percent, and this range was used as the basis for the quantification of benefits. Some commenters believe a lower percentage of incidents would be preventable by the rule changes. If EPA has mischaracterized some incidents as preventable, then the quantified benefits would be lower than estimated. Conversely, if EPA has mischaracterized some incidents as not preventable, then the quantified benefits would be higher than estimated.

However, EPA recognizes that the benefits estimate is biased downward by an unknown degree. First, pesticide incidents, like many illnesses and accidents, are underreported because sufferers may not seek medical care, cases may not be correctly diagnosed, and correctly diagnosed cases may not be filed to the central reporting database. Also, many symptoms of pesticide poisoning, such as fatigue, nausea, rash, dizziness, and diarrhea, may be confused with other illnesses and may not be reported as related to

pesticide exposure. Studies estimate that underreporting of pesticide exposure ranges from 20% to 95% (Refs. 5, 6, 7, 8, 9, 10, and 11). EPA included underreporting of pesticide incidents as a factor in the sensitivity analysis of the potential benefits of the final rule (Ref. 1), but based its estimate of the benefits on the rule on figures unadjusted for underreporting.

EPA's approach to estimating the quantitative benefits of the rule only measures avoided medical costs and lost wages, not the willingness to pay to avoid possible symptoms due to pesticide exposure, which could be substantially higher. Many of the negative health impacts associated with agricultural pesticide application are borne by agricultural workers and handlers, a population that more acutely feels the impact of lost work time on their incomes and family health. An increase in the overall level of competency for certified applicators and noncertified applicators working under their direct supervision would also be beneficial to people who work, play, or live in areas treated with RUPs, such as agricultural workers, neighbors of agricultural fields, and consumers whose homes are treated. Under-trained and underqualified pesticide applicators may not be aware immediately of the potential impacts to their own health or the health of those who live or work around areas where RUPs are applied, and therefore may not independently adopt measures protective of themselves or others, necessitating intervention by the government to ensure these populations are adequately protected.

It is reasonable to expect that the qualitative benefits of the rule are more substantial. Although EPA is not able to measure the full benefits that accrue from reducing chronic exposure to pesticides, well-documented associations between pesticide exposure and certain cancer and non-cancer chronic health effects exist in peer-reviewed literature. See the Economic Analysis for this rule for a discussion of the peer-reviewed literature (Ref. 1). The final rule requirements for strengthened competency standards for private applicators, expanded training/qualification for noncertified applicators, additional certification categories, a minimum age for all persons using RUPs, and appropriate certification options in Indian country will lead to an overall reduction in the number of human health incidents related to acute and chronic pesticide exposure and environmental contamination from improper or misapplication of pesticides. Overall, the weight of evidence supports the

conclusion that the final rule requirements will result in long-term health benefits to certified and noncertified applicators, as well as to the public and the environment.

It is reasonable to expect that the final rule will benefit the environment and public health. The final rule enhances private applicator competency standards to include information on protecting the environment during and after application, such as avoiding contamination of water supplies. The requirement to ensure that all applicators continue to demonstrate their competency to use RUPs without unreasonable adverse effect should better protect the public from RUP exposure when occupying treated buildings or outdoor spaces, consuming treated food products, and when near areas where RUPs have been applied. The Economic Analysis for this final rule includes a qualitative discussion of 68 incidents from 2009 through 2013 where applicator errors while applying RUPs damaged crops or killed fish, bird, bees, or other animals (Ref. 1). The final rule is expected to reduce misapplication, and thereby improve environmental quality through cleaner water and less impact on non-target plants and animals.

In addition, the final rule specifically mitigates risks to children. The final rule establishes a minimum age of 18 for certified applicators (private and commercial) and noncertified applicators working under the direct supervision of commercial applicators. The final rule establishes a minimum age of 18 for noncertified applicators using RUPs under the direct supervision of private applicators, with a limited exception requiring noncertified applicators under the supervision of private applicators who are members of their immediate family to be at least 16 years old, provided certain conditions are met. Since children's bodies are still developing, they may be more susceptible to risks associated with RUP application and therefore will benefit from strengthened protections. In addition, research has shown that children may not have developed fully the capacity to make decisions and to weigh risks properly (Refs. 12, 13, 14, 15). Proper application of RUPs is essential to protect the safety of people who work, visit, or live in or near areas treated with RUPs, people who eat food that has been treated with RUPs, and people and animals who depend on an uncontaminated water supply, as well as the safety of the applicator him or herself. Therefore, it is reasonable to expect that restricting certification to persons over 18 years old, with a

limited exception, will better protect both the applicators and those who may be affected negatively by improper or misapplication.

Children also suffer the effects of RUP exposure from residential applications and accidental ingestion. Exposure from residential applications can occur when RUPs are applied in areas where children live, attend school, or visit. Accidental ingestion occurs when children get access to an RUP that has been improperly stored (*e.g.*, transferred to an unmarked container or left accessible to the public) (Ref. 16). The final rule requires pesticide safety training for noncertified applicators, strengthens competency standards for private applicators, and requires all applicators to demonstrate continued competency to use RUPs. These changes will remind applicators about core principles of safe pesticide use and storage, reducing the likelihood that children would experience these types of RUP exposures. Thus, the final rule should reduce children's exposure to RUPs and contamination caused by improper application of pesticides.

III. Introduction and Procedural History

Broadly defined, a pesticide is any agent used to kill or control undesired insects, weeds, rodents, fungi, bacteria, or other organisms. See 7 U.S.C. 136(t) & (u). Chemical pest control plays a major role in modern agriculture and has contributed to dramatic increases in crop yields for most field, fruit and vegetable crops. Additionally, pesticides ensure that the public is protected from health risks, such as West Nile Virus, Lyme disease, Zika, and the plague, and help manage invasive plants and organisms that pose significant harm to the environment. Pesticides are also used to ensure that housing and workplaces are free of pests, and to control microbial agents in health care settings. EPA's obligation under FIFRA is to register only those pesticides that do not cause unreasonable adverse effects to human health or the environment. EPA is committed to protecting against these potential harms and to ensure access to a safe and adequate food supply in the United States.

FIFRA requires EPA to consider the benefits of pesticides as well as the potential risks. This consideration does not override EPA's responsibility to protect human health and the environment; rather, where a pesticide's use provides benefits, EPA must ensure that the product can be used without posing unreasonable adverse effects to human health or the environment. Some

pesticides that are valuable to society but that might cause unreasonable adverse effects to human health or the environment if applied by inexperienced users are classified for restricted use (known as RUPs). Certified applicators have the knowledge, experience, and skills to understand and reliably follow the precise and often complex risk mitigation measures specified on the RUP labeling. Certification serves to ensure competency of applicators to use these RUPs, and therefore to protect the applicator, persons working under the direct supervision of the applicator, the general public, and the environment through judicious and appropriate use of RUPs.

Applicator certification enables the registration of pesticides that otherwise could not be registered, allowing the use of RUPs for pest management in agricultural production, building and other structural pest management, turf and landscape management, forestry, public health, aquatic systems, food processing, stored grain, and other areas.

The certification rule, which sets standards for applicators using RUPs, is 40 years old and has not had major revisions since 1978. For over 25 years, EPA has been engaging with stakeholders to improve the certification of applicators and improve the existing certification rule. See Unit IV.B. The changes in today's final rule (revising the certification rule) focus on five main objectives:

- Ensure that certified applicators are and remain competent to use RUPs without unreasonable adverse effects.
- Ensure that noncertified applicators receive adequate information and supervision to protect themselves and to ensure they use RUPs without posing unreasonable adverse effects.
- Set standards for States, Tribes, and Federal agencies to administer their own certification programs.
- Protect human health and the environment from risks associated with use of RUPs.
- Ensure the continued availability of RUPs used for public health and pest control purposes.

The proposed changes were issued for public comment on August 24, 2015 (Ref. 17). After 150 days, the comment period closed on January 22, 2016. EPA received over 700 unique comments on the proposed rule. Commenters represented a range of stakeholders and co-regulators, including certifying authorities, organizations representing States and Tribes, university extension programs, growers and grower organizations, pesticide applicators and

applicator associations, farmworker advocacy organizations, the Small Business Administration Office of Advocacy, other groups, and individual members of the public.

Commenters provided valuable input on all aspects of the certification rule. Many comments from certifying authorities and university extension programs provided details about current administration of their applicator certification programs and the impacts various provisions of the proposal would have if finalized. The main areas of interest to commenters included proposed provisions related to: Recertification and equivalency for State, Tribal and Federal agency certification programs, minimum age, implementation, reciprocity between certifying authorities, and noncertified applicators. Commenters also submitted feedback on the impact the proposal would have on applicators of non-RUPs (*i.e.*, general use or unclassified pesticides), the administration of State, Tribal, and Federal agency programs, and the estimated costs of the proposal.

EPA considered the comments received on the proposal and evaluated the costs and benefits of various requirements in developing a final revised rule that is expected to achieve the benefits outlined throughout this preamble. For a summary of the benefits, see the table in Unit I.D. and the discussion of costs and benefits in Unit II.C.

IV. Context, Considerations, and Reasons for This Rulemaking

A. Context for This Rulemaking

1. *Statutory authority.* FIFRA, 7 U.S.C. 136 *et seq.*, was signed into law in 1947 and established a framework for the regulation of pesticide products, requiring them to be registered by the Federal government before sale or distribution in commerce. Amended in 1972 by the Federal Environmental Pesticide Control Act, FIFRA broadened federal pesticide regulatory authority in several respects, notably by making it unlawful for anyone to use any registered product in a manner inconsistent with its labeling, 7 U.S.C. 136i(a)(2)(G), and limiting the sale and use of RUPs to certified applicators and those under their direct supervision. 7 U.S.C. 136i(a)(2)(F). The amendments provided civil and criminal penalties for violations of FIFRA. 7 U.S.C. 136l. The new and revised provisions augmented EPA's authority to protect humans and the environment from unreasonable adverse effects of pesticides.

As a general matter, in order to obtain a registration for a pesticide under

FIFRA, the applicant must demonstrate that the pesticide satisfies the statutory standard for registration, section 3(c)(5) of FIFRA. 7 U.S.C. 136a(c)(5). That standard requires, among other things, that the pesticide performs its intended function without causing "unreasonable adverse effects on the environment." The term "unreasonable adverse effects on the environment" takes into account the economic, social, and environmental costs and benefits of the use of any pesticide and includes any unreasonable risk to man or the environment. 7 U.S.C. 136(bb). This standard requires a finding that the risks associated with the use of a pesticide are justified by the benefits of such use, when the pesticide is used in compliance with the terms and conditions of registration, or in accordance with commonly recognized practices. See *Defenders of Wildlife v. EPA*, 882 F.2d 1294, 1298–99 (8th Cir. 1989) (describing FIFRA's required balancing of risks and benefits).

A pesticide product may be unclassified, or it may be classified for restricted or for general use. Non-RUPs (*i.e.*, general use or unclassified pesticides) generally have a lower toxicity than RUPs and so pose less potential to harm humans or the environment. The general public can buy and use non-RUPs without special permits or training.

Where EPA determines that a pesticide product would not meet these registration criteria if unclassified or available for general use, but could meet the registration criteria if applied by experienced, competent applicators, EPA classifies the pesticide for restricted use only by certified applicators. 7 U.S.C. 136a(d)(1). Generally, EPA classifies a pesticide as restricted use if its toxicity exceeds one or more human health toxicity criteria or based on other standards established in regulation. EPA may also classify a pesticide as restricted use if it meets certain criteria for hazards to non-target organisms or ecosystems, or if EPA determines that a product (or class of products) may cause unreasonable adverse effects on human health and/or the environment without such restriction. The restricted use classification designation must be prominently placed on the top of the front panel of the pesticide product labeling.

The risks associated with products classified as RUPs require additional regulatory restrictions to ensure that when used they do not cause unreasonable adverse effects on human health or the environment. However, RUPs can be used without unreasonable

adverse effects by properly competent and equipped applicators closely following labeling instructions. These products may only be applied by certified applicators who have demonstrated competency in the safe application of pesticides, including the ability to read and understand the complex labeling requirements, or persons working under their direct supervision. FIFRA requires EPA to develop standards for certification of applicators, 7 U.S.C. 136i(a)(1), and allows States to certify applicators under a certification plan approved by EPA. 7 U.S.C. 136i(a)(2).

Provisions limiting EPA's authority with respect to applicator certification include 7 U.S.C. 136i(a)(1), (c), and (d); 7 U.S.C. 136w–5; and 7 U.S.C. 136(2)(e)(4). Section 136i(a)(1) of FIFRA prohibits EPA from requiring private applicators to take an exam to establish competency in the use of pesticides under an EPA-administered certification program, or from requiring States to impose an exam requirement as part of a State plan for certification of applicators.

Section 136i(c) of FIFRA directs EPA to make instructional materials on Integrated Pest Management (IPM) available to individuals, but it prohibits EPA from establishing requirements for instruction or competency determination on IPM. EPA makes IPM instructional materials available to individual users through the National Pesticide Applicator Certification Core Manual, which is used directly or as a model by many States. Additionally, EPA has developed and implemented a variety of programs to inform pesticide applicators about the principles and benefits of IPM. These include the EPA's IPM in Schools Program, the Pesticide Environmental Stewardship Program (PESP), and the Strategic Agricultural Initiative (SAI) Grant Program, as well as several other efforts. The Agency will continue to place a high priority on initiatives and programs that promote IPM practices. For additional information about the range of programs and activities, visit the Office of Pesticide Programs PESP Web page on the EPA Web site at: <https://www.epa.gov/pestp>.

Section 136i(d) of FIFRA prohibits EPA from requiring private applicators to keep records or file reports in connection with certification requirements. However, private applicators must keep records of RUP applications containing information substantially similar to that which EPA requires commercial applicators to maintain pursuant to Department of

Agriculture (USDA) regulations at 7 CFR 110.3.

Section 136w–5 of FIFRA prohibits EPA from establishing training requirements for maintenance applicators (certain applicators of non-agricultural, non-RUPs) or service technicians.

FIFRA's definition of "under the direct supervision of a certified applicator" allows noncertified applicators to apply RUPs under the direct supervision of a certified applicator even though the certified applicator may not be physically present at the time and place the pesticide is applied. 7 U.S.C. 136(e)(4). EPA can, on a product-by-product basis and through the pesticide's labeling, require application of an RUP only by a certified applicator.

2. *EPA's regulation of pesticides.* In order to protect human health and the environment from unreasonable adverse effects that might be caused by pesticides, EPA has developed and implemented a rigorous process for registering and re-evaluating pesticides. The registration process begins when a manufacturer submits an application to register a pesticide. The application must contain (or cite to) required test data, including information on the pesticide's chemistry, environmental fate, toxicity to humans and wildlife, and potential for human exposure. The Agency also requires a copy of the proposed labeling, including directions for use, and appropriate warnings.

Once an application for a new pesticide product is received, EPA conducts an evaluation, which includes a detailed review of scientific data to determine the potential impact on human health and the environment. EPA considers the risk assessments and results of any peer review, and evaluates potential risk management measures that could mitigate any risks that are at or above EPA's level of concern. Risk management measures could include, among other things, classifying the pesticide as restricted use, limitations on the use of the pesticide, or requiring the use of engineering controls.

In the registration process, EPA evaluates the proposed use(s) of the pesticide to determine whether it would cause adverse effects on human health, non-target species, and the environment. FIFRA requires that EPA balance the benefits of using a pesticide against the risks from that use.

If the application for registration does not contain evidence sufficient for EPA to determine that the pesticide meets the FIFRA registration criteria, EPA communicates to the applicant the need for more or better refined data, labeling

modifications, or additional use restrictions. Once the applicant has demonstrated that a proposed product meets the FIFRA registration criteria and—if the use would result in residues of the pesticide on food or feed—a tolerance or exemption from the requirement of a tolerance under the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 301 *et seq.*, is available, EPA approves the registration subject to any risk mitigation measures necessary to achieve that approval. EPA devotes significant resources to crafting the terms and conditions of each pesticide registration to ensure that each pesticide product meets the FIFRA requirement that pesticides not cause unreasonable adverse effects to the public and the environment.

Part of EPA's pesticide regulation and evaluation process is determining whether a pesticide should be classified for restricted use. As discussed in Unit II.A., EPA classifies products as RUPs when they would cause unreasonable adverse effects on the environment, the applicator, or the public without additional restrictions beyond the labeling requirements. 7 U.S.C. 136a(d)(1)(C). EPA maintains a list of active ingredients with uses that have been classified as restricted use at 40 CFR 152.175. In addition, EPA periodically publishes an "RUP Report" that lists RUP products' registration number, product name, status, registration status, company name, and active ingredients (<https://www.epa.gov/pesticide-worker-safety/restricted-use-products-rup-report>). EPA has classified about 900 pesticide products as RUPs, which is about 5% of all registered pesticide products. EPA does not have reliable data on the relative usage of RUPs versus non-RUPs.

When EPA approves a pesticide, the labeling specifies the risk mitigation measures required by EPA. Potential risk mitigation measures include requiring certain engineering controls, such as use of closed systems for mixing pesticides and loading them into application equipment to reduce potential exposure to those who handle pesticides; establishing conditions on the use of the pesticide by specifying certain use sites, maximum application rates or maximum number of applications; and limiting the use of the product to certified applicators (*i.e.*, prohibiting application of an RUP by a noncertified applicator working under the direct supervision of a certified applicator). Since users must comply with the directions for use and use restrictions on a product's labeling, EPA uses the labeling to establish and convey mandatory requirements for how

the pesticide must be used to protect the applicator, the public, and the environment from pesticide exposure.

Under FIFRA, EPA is required to review periodically the registration of pesticides currently registered in the United States. The 1988 FIFRA amendments required EPA to establish a pesticide reregistration program. Reregistration was a one-time comprehensive review of the human health and environmental effects of pesticides first registered before November 1, 1984 to make decisions about these pesticides' future use. The Food Quality Protection Act of 1996 (FQPA) amendments to FIFRA require that EPA establish, through rulemaking, an ongoing "registration review" process of all pesticides at least every 15 years. The final rule establishing the registration review program was signed in August 2006 (40 CFR 155, subpart C). The purpose of both re-evaluation programs is to review all pesticides registered in the United States to ensure that they continue to meet current safety standards based on up-to-date scientific approaches and relevant data.

Pesticides reviewed under the reregistration program that met current scientific and safety standards were declared "eligible" for reregistration. The results of EPA's reviews are summarized in Reregistration Eligibility Decision (RED) documents. The last RED was completed in 2008. Often before a pesticide could be determined "eligible," certain risk reduction measures had to be put in place. For a number of pesticides, measures intended to reduce exposure to certified applicators and pesticide handlers were needed and are reflected on pesticide labeling. Where necessary to address occupational risk concerns, REDs include mitigation measures such as: Voluntary cancellation of the product or specific use(s); limiting the amount, frequency or timing of applications; prohibiting particular application methods; classifying a product or specific use(s) as for restricted use; requiring the use of specific personal protective equipment (PPE); establishing specific restricted entry intervals; and improving use directions.

Rigorous ongoing education and enforcement are needed to ensure that these mitigation measures are appropriately implemented in the field. The framework provided by the certification rule and associated programs are critical for ensuring that the improvements brought about by reregistration and registration review are realized in the field. For example, the requirement for applicators to demonstrate continued competency, or

to renew their certifications periodically, is one way to educate applicators about changes in product labeling to ensure they continue to use RUPs in a manner that will not harm themselves, the public, or the environment. The changes to the final rule are designed to enhance the effectiveness of the existing regulatory structure.

In summary, EPA's pesticide reregistration and registration reviews assess the specific risks associated with particular chemicals and ensure that the public and environment do not suffer unreasonable adverse effects from the products containing those pesticide chemicals. EPA implements the risk reduction and mitigation measures that result from the pesticide reregistration and registration review programs through individual pesticide product labeling.

3. *Certification rule.* The certification rule is intended to ensure that persons using or supervising the use of RUPs are competent to use these products without causing unreasonable adverse effects to human health or the environment and to provide a mechanism by which States, Tribes, and Federal agencies can administer their own programs to certify applicators of RUPs as competent. FIFRA distinguishes three categories of persons who might apply RUPs:

- *Commercial applicators.* "Commercial applicator" is defined at 7 U.S.C. 136(e)(3). This group consists primarily of those who apply RUPs for hire, including applicators who perform agricultural pest control, structural pest control, lawn and turf care, and public health pest control.

- *Private applicators.* "Private applicator" is defined at 7 U.S.C. 136(e)(2). This group consists primarily of farmers or agricultural growers who apply RUPs to their own land to produce an agricultural commodity.

- *Noncertified applicators.* A noncertified applicator is a person who uses RUPs under the direct supervision of a certified applicator. The phrase "under the direct supervision of a certified applicator" is defined at 7 U.S.C. 136(e)(4).

The existing certification rule establishes requirements for submission and approval of State plans for the certification of applicators. Consistent with the provisions of FIFRA (7 U.S.C. 136i(a)(2)) and the State plan requirements in the existing rule, programs for the certification of applicators of RUPs are currently implemented by all States and most territories. (As used in FIFRA, the term State means a State, the District of

Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, the Trust Territory of the Pacific Islands, and American Samoa; the term State has the same meaning in this final rulemaking.) Certification programs are also carried out by four other Federal agencies under approved Federal agency plans. In addition, EPA has approved plans for four Tribes. EPA also directly administers a national certification plan for Indian country (Ref. 3) and has implemented a specific certification plan for the Navajo Nation (Ref. 4). The States, Tribes, and Federal agencies certify applicators in accordance with their EPA-approved certification plans (Ref. 18).

The existing certification rule establishes competency standards for persons seeking to become certified as private or commercial applicators. For a person to become certified as a private applicator, he or she must either pass an exam covering a general set of information related to pesticide application and safety or qualify through a non-exam option administered by the certifying authority. For a person to become certified as a commercial applicator, he or she must pass at least two exams—one covering the general or "core" competencies related to general pesticide application and environmental safety and an exam related to each specific category in which he or she intends to apply pesticides. The existing certification rule lists 10 categories of certification for commercial applicators: Agricultural pest control—plant; agricultural pest control—animal; forest pest control; ornamental and turf pest control; seed treatment; aquatic pest control; right-of-way pest control; industrial, institutional, structural and health related pest control; public health pest control; regulatory pest control; and demonstration and research pest control. 40 CFR 171.3(b). (Note: Documents from EPA and other certifying authorities sometimes refer to 11 categories of certification, counting the two subcategories under agricultural pest control as individual categories.) Although EPA only requires certification of applicators who use RUPs, most States require all commercial "for hire" applicators to be certified, regardless of whether they plan to use RUPs or only non-RUPs. Once the applicator completes the necessary requirements, the certifying authority issues to the applicator a certification valid for a set period of time, ranging from 1–6 years depending on the State, Tribe, or Federal agency that provides the certification.

The existing regulation requires States to implement a recertification process to ensure that applicators maintain ongoing competency to use pesticides safely and properly. 40 CFR 171.8(a)(2). However, the existing rule does not have requirements regarding the frequency, content, or standards for applicator recertification. States, Tribes and Federal agencies have established varying requirements for applicators to be recertified, such as attending a full-day workshop, earning a specific number of CEUs, or passing written exams. Applicators who do not complete the recertification requirements in the established period no longer hold a valid certification and cannot use RUPs after their certification expires.

Under the existing certification rule, noncertified applicators (*i.e.*, persons using RUPs under the direct supervision of certified applicators, must receive general instructions and be able to contact their supervisor in the event of an emergency). The rule does not have specific training requirements, a limit on the distance between the supervisor and noncertified applicator, or a restriction on the number of noncertified applicators that one certified applicator can supervise.

B. Considerations for Improving the Certification Rule

1. *Regulatory history.* The Agency proposed the existing certification rule in 1974. EPA finalized sections covering applicator competency standards and noncertified applicator requirements (40 CFR 171.1 through 171.6) in 1974 (Ref. 19), followed by sections outlining State plan submission and review and certification in Indian country (40 CFR 171.7 through 171.10) in 1975 (Ref. 20), and the requirements for EPA-administered plans (40 CFR 171.11) in 1978 (Ref. 21). Since 1978, EPA has made minor amendments to the rule, such as requiring dealer recordkeeping and reporting under EPA-implemented plans and establishing standards for EPA-administered plans (Refs. 22 and 23).

In 1990, EPA proposed amendments to the certification rule that included provisions for establishing private applicator categories, adding categories for commercial applicators, revising applicator competency standards, establishing criteria and levels of supervision for the use of an RUP by a noncertified applicator, criteria for approving State noncertified applicator training programs, establishing recertification requirements for private and commercial applicators, and eliminating the exemption for non-

reader certification (Ref. 24). EPA took comments on the proposal but did not finalize it due to constraints on EPA's resources.

Because no major revision has been made to this federal regulation in almost 40 years, States have taken the lead in revising and updating standards for certification and recertification. Many States updated their certification programs based on EPA's 1990 proposal. Others have amended their programs to address changes in technology or other aspects of pesticide application. As a result, the State requirements for certification of applicators are highly varied and most States go well beyond the existing Federal requirements for applicator certification. This situation has created an uneven regulatory landscape and problems in program consistency that complicate registration decisions, inhibit certifying authorities from accepting as valid certifications issued by other certifying authorities, and hinder EPA's ability to develop national program materials that meet the needs of all States.

2. Stakeholder engagement. In 1996, stakeholders from the Federal and State governments and cooperative extension programs formed the Certification and Training Assessment Group (CTAG) to assess the current status of and provide direction for Federal and State pesticide applicator certification programs. CTAG's mission is to develop and implement proposals to strengthen Federal, State and Tribal pesticide certification and training programs, with the goal of enhancing the knowledge and skills of pesticide users. Pesticide certification and training programs are run primarily by State government programs and cooperative extension service programs from State land grant universities, so these stakeholders provide valuable insight into the needs of the program.

In 1999, CTAG issued a comprehensive report, "Pesticide Safety in the 21st Century" (Ref. 25), which recommended improvements for State and Federal pesticide applicator certification programs, including how to strengthen the certification rule. The report suggests that EPA update the core training requirements for private and commercial applicators, establish a minimum age for applicator certification, set standards for a recertification or continuing education program, facilitate the ability of applicators certified in one State to work in another State without going through the whole certification process again, and strengthen protections for noncertified applicators working under

the direct supervision of a certified applicator (Ref. 25).

Around the same time as CTAG issued its report, EPA initiated the National Assessment of the Pesticide Worker Safety Program (the National Assessment), an evaluation of its pesticide worker safety program (pesticide applicator certification and agricultural worker protection) (Ref. 27). The National Assessment engaged a wide array of stakeholder groups in public forums to discuss among other things, the CTAG recommendations and other necessary improvements to EPA's pesticide applicator certification program. In 2005, EPA issued the "Report on the National Assessment of EPA's Pesticide Worker Safety Program" (Ref. 27), which included many recommendations for rule revisions to improve the applicator certification program. The various individual opinions expressed and suggestions made during the course of the assessment centered on a few broad improvement areas: The expansion and upgrade of applicator and worker competency and promotion of safer work practices, improved training of and communication with all pesticide workers, increased enforcement efforts and improved training of inspectors, training of health care providers and monitoring of pesticide incidents, and finally, program operation, efficiency and funding (Ref. 27). Suggestions specific to certification of applicators included improving standards for noncertified applicators working under the direct supervision of certified applicators, establishing a minimum age for applicator certification, requiring all applicators to pass an exam to become certified, and facilitating reciprocity between States for certification of applicators (Ref. 27). While EPA addressed some of the recommendations through grants, program guidance, and other outreach, others could only be accomplished by rulemaking.

During the initial stages of the framing of this proposal, EPA's Federal advisory committee on pesticide issues, the Pesticide Program Dialogue Committee (PPDC), formed a workgroup in 2006 to provide feedback to EPA on different areas for change to the certification rule and the WPS. The workgroup had over 70 members representing a wide range of stakeholders. EPA shared with the workgroup suggestions for regulatory change identified through the National Assessment and solicited comments. The workgroup convened for a series of meetings and conference calls to get more information on specific parts of the regulation and areas where EPA was considering change, and provided

feedback to EPA. The workgroup focused on evaluating possible changes under consideration by EPA by providing feedback from each member's or organization's perspective. Comments from the PPDC workgroup members have been compiled into a single document and posted in the docket (Ref. 28).

EPA convened a Small Business Advocacy Review (SBAR) Panel on potential revisions to the certification rule and the WPS in 2008. The SBAR Panel was convened under section 609(b) of the Regulatory Flexibility Act (RFA), 5 U.S.C. 609(b). As part of the SBAR Panel's activities, EPA consulted with a group of Small Entity Representatives (SERs) from small businesses and organizations that could be affected by the potential revisions. EPA provided the SERs with information on potential revisions to both rules and requested feedback on the proposals under consideration. EPA asked the SERs to offer alternate solutions to the potential proposals presented to provide flexibility or to decrease economic impact for small entities while still accomplishing the goal of improved safety (Ref. 29).

Specific to the certification rule, the SERs provided feedback on requirements for the minimum age of pesticide applicators and protections for noncertified applicators working under the direct supervision of a certified applicator. The SERs' responses were compiled in an Appendix to the final Panel Report and posted in the docket (Ref. 29). EPA considered input from the SERs as part of the evaluation of available options for this rulemaking and SER feedback is discussed where relevant in this preamble.

Consistent with EPA's Indian Policy and Tribal Consultation Policy, EPA's Office of Pesticide Programs conducted a consultation on the proposed rulemaking with Tribes. The consultation was carried out via a series of scheduled conference calls with Tribal representatives to inform them about potential regulatory changes, especially areas that could affect Tribes. EPA also informed the Tribal Pesticide Program Council (TPPC) about the potential changes to the regulation (Ref. 30).

In addition to formal stakeholder outreach, EPA held numerous meetings at the request of various stakeholders to discuss concerns and suggestions in detail.

3. Public comments on the proposal. EPA received over 700 distinct comments on the proposed changes (Ref. 17). Commenters represented program stakeholders and regulators,

including State pesticide regulatory agencies, pesticide safety education programs (university extension programs), farm bureaus, associations, nonprofit organizations, certified applicators, applicator associations and growers.

Many comments from State regulatory agencies and pesticide safety education programs provide details describing intricacies of their certification programs and how the proposal would impact them. Comments cover all areas of the proposal, but the areas of the proposal that received the most critical comments include recertification and equivalency, impact on applicators of non-RUPs, reciprocity, establishing a minimum age of 18 for certified and noncertified applicators, unfunded mandates, implementation timing, and EPA's Economic Analysis of the proposed changes.

During the public comment period, EPA met with stakeholders individually and as organizations to discuss the proposal. EPA met with States through the AAPCO workgroup formed to respond to the proposal, as well as through other State organization meetings. At the request of the Small Business Administration's Office of Advocacy, EPA provided an overview of the proposal to interested small business representatives.

EPA has included a summary of most comments received and EPA's responses in this document. EPA has also prepared a separate document summarizing comments not included in this document and EPA's responses (Ref. 2).

4. Children's health protection. Executive Order 13045 (62 FR 19885, April 23, 1997) and modified by Executive Order 13296 (68 FR 19931, April 18, 2003) requires Federal agencies to identify and assess environmental health risks that may disproportionately affect children. Children who apply pesticides face risks of exposure. A 2003 study identified 531 children under 18 years old with acute occupational pesticide-related illnesses over a 10-year period (Ref. 23). This study raised concerns for chronic impacts: "Because [the] acute illnesses affect young people at a time before they have reached full developmental maturation, there is also concern about unique and persistent chronic effects" (Ref. 31). Although the study is not limited to RUPs, its findings indicate the potential risk to children from working with and around pesticides.

The Fair Labor Standard Act's (FLSA) child labor provisions, which are administered by DOL, permit children to work at younger ages in agricultural

employment than in non-agricultural employment. Children under 16 years old are prohibited from doing hazardous tasks in agriculture, including handling or applying acutely toxic pesticides. 29 CFR 570.71(a)(9). DOL has established a general rule, applicable to most industries other than agriculture, that workers must be at least 18 years old to perform hazardous jobs. 29 CFR 570.120.

Research has shown differences in the decision making of adolescents and adults that leads to the conclusion that adolescent applicators may take more risks than those who are adults. Behavioral scientists note that responsible decision making is more common in young adults than adolescents: "Socially responsible decision making is significantly more common among young adults than among adolescents, but does not increase appreciably after age 19. Adolescents, on average, scored significantly worse than adults did, but individual differences in judgment within each adolescent age group were considerable. These findings call into question recent assertions, derived from studies of logical reasoning, that adolescents and adults are equally competent and that laws and social policies should treat them as such" (Ref. 15). Decision-making skills and competency differ between adolescents and adults. While research has focused on decision making of juveniles in terms of legal culpability, the research suggests similar logic can be applied to decision making for pesticide applications.

In sum, children applying RUPs—products that require additional care when used to ensure they do not cause unreasonable adverse effects on people or the environment—may be at a potentially higher risk of pesticide exposure and illness. The elevated risk to the adolescent applicators, in addition to adolescents' not fully developed decision-making abilities, warrant careful consideration of the best ways to protect them. It is reasonable to expect that the revised regulation will mitigate or eliminate many of the risks faced by adolescents covered by this rule.

5. Retrospective regulatory review. On January 18, 2011, President Obama issued Executive Order 13563 (76 FR 3821, January 21, 2011), to direct each Federal agency to develop a plan, consistent with law and its resources and regulatory priorities, under which the agency would periodically review its existing significant regulations to determine whether any such regulations should be modified, streamlined,

expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives. The Executive Order also enumerates a number of principles and directives to guide agencies as they work to improve the Nation's regulatory system.

In developing its plan for the periodic retrospective review of its regulations, EPA sought public input on the design of EPA's plan, as well as stakeholder suggestions for regulations that should be the first to undergo a retrospective review (76 FR 9988, February 23, 2011). EPA issued the final plan, titled "Improving Our Regulations: Final Plan for Periodic Retrospective Reviews of Existing Regulations," in August 2011 (<http://www.epa.gov/regdarrt/retrospective/documents/eparetroreviewplan-aug2011.pdf>). The existing certification rule was nominated for retrospective review as part of the public involvement process in 2011. In EPA's final plan, EPA committed to review the existing certification rule to determine how to clarify requirements and modify potentially redundant or restrictive requirements, in keeping with Executive Order 13563.

The results of EPA's review, which included identified opportunities for improving the existing regulation, were incorporated into this rulemaking effort. EPA expects revised regulation to achieve the benefits outlined in Section II.C. For a summary of the benefits, see the table in Unit I.D. and the discussion of costs and benefits of the final rule in Unit II.C.

C. Reasons for This Rulemaking

1. Reasons for regulatory change. The certification rule must be updated to ensure that the certification process adequately prepares and ensures the continued competency of applicators to use RUPs. Several factors prompted EPA to propose changes to the existing rule: The changing nature of pesticide labeling, risks associated with specific methods for applying pesticides, adverse human health and ecological incidents, inadequate protections for noncertified applicators of RUPs, an uneven regulatory landscape, and outdated and obsolete provisions in the rule related to the administration of certification programs by Tribes and Federal agencies.

i. The changing nature of pesticide labeling. As discussed in Unit IV.A., EPA uses a rigorous process to register pesticides. EPA has also implemented the pesticide reregistration program and the registration review program to review registered pesticides periodically

to ensure they continue to meet the necessary standard. As a result of these ongoing evaluations, risk-based labeling changes are occurring more frequently than they were when the certification rule was first issued. Changes address, among other topics, pesticide product formulation and packaging, application methods, types of personal protective equipment, and environmental concerns, such as the need to protect pollinators. Pesticides that present greater risks generally have more detailed risk mitigation measures, which can make the pesticide labeling more complex. For pesticides classified as RUPs, it is essential that applicators stay abreast of the changes to the labeling and understand the risk mitigation measures, because if the products are not used according to their labeling, they may cause unreasonable adverse effects to the applicator, the public or the environment. EPA's registration decisions assume that the applicator follows all labeling instructions; when the labeling is followed, RUPs can be used without unreasonable adverse effects. The current regulation requires that applicators demonstrate continued competency to use RUPs, but does not specify the length of the certification period or standards for recertification and establishes only very basic competencies for private applicators. EPA must ensure that certified applicators demonstrate and maintain an understanding of how to use RUPs in a manner that will not cause unreasonable adverse effects so that EPA can continue to register RUPs. Therefore, EPA is establishing a 5-year certification period, criteria for recertification programs, and specifying in more detail the competency standards for private applicators.

ii. Specific application methods that require additional applicator competency. RUPs are applied using a variety of application methods. Some methods of application may require the applicator to have additional specific competencies to perform these applications in a way that minimizes risk to the applicator, bystander, and the environment. Spray applications, particularly spraying pesticides from an aircraft, may result in off-target drift of the pesticide. For example, a study estimates that 37% to 68% of acute pesticide-related illnesses in agricultural workers are caused by spray drift, including both ground-based and aerial spray applications (Ref. 32). In the 2008 REDs for soil fumigants (Ref. 33), EPA identified risks that required additional training for soil fumigant

applicators, and specified labeling amendments requiring additional training in addition to the existing requirement for the applicator to be certified. The soil fumigant REDs also acknowledged that a specific certification category requiring demonstration of competency by passing a written exam related to applying fumigants to soil would be an acceptable alternative risk mitigation measure. EPA must ensure that applicators are competent to use RUPs in a manner that will not cause unreasonable adverse effects. Therefore, EPA is adding to the regulation categories for commercial and private applicators performing aerial application, soil fumigation, and non-soil fumigation.

iii. Adverse human health and ecological incidents. Much has changed over the last 40 years related to use of RUPs—pesticide product formulation and labeling, application methods, types of personal protective equipment, and environmental concerns. EPA is updating the regulation to address these and other changes affecting applicators of RUPs. In addition to the hundreds of potentially avoidable acute health incidents related to RUP exposure reported each year (Ref. 16), several major incidents have occurred that demonstrate that a single or limited misapplication of an RUP can have widespread and serious effects.

In one of the most significant pesticide misuse cases from the mid-1990s, there was widespread misuse of the RUP methyl parathion, an insecticide used primarily on cotton and other outdoor agricultural crops, to control pests indoors. The improper use of this product by a limited number of applicators across several States led to the widespread contamination of hundreds of homes, significant pesticide exposures and adverse health effects for hundreds of homeowners and children, and clean-up costs of millions of dollars (Refs. 34 and 35). The incident resulted in one of the most significant and widespread pesticide exposure cases in EPA's history. In another incident, an applicator using the RUP aluminum phosphide caused the death of 2 young girls and made the rest of the family ill (see, e.g., <http://www.justice.gov/archive/usao/ut/news/2011/bugman%20plea.pdf> and http://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2249). In 2015, improper use of methyl bromide in the Virgin Islands caused serious injury and long-term hospitalization of a four people (see, e.g., <https://www.justice.gov/opa/>

[pr/terminix-companies-agree-pay-10-million-applying-restricted-use-pesticide-residences-us](https://www.justice.gov/opa/pr/terminix-companies-agree-pay-10-million-applying-restricted-use-pesticide-residences-us)). Also in 2015, fumigation with sulfuryl fluoride that did not follow proper procedures caused serious injury to a young boy (see, e.g., <https://www.justice.gov/usao-sdfl/pr/fumigation-company-and-two-individuals-pled-guilty-connection-illegal-pesticide>). Finally, several severe health incidents have resulted from the public getting access to RUPs that were unlawfully transferred into different containers (in one case, a soda bottle) that did not have the necessary labeling (Ref. 1).

In addition to human health incidents from RUP exposure, there are instances where use of RUPs has had negative impacts on the environment. Although data on the damage associated ecological incidents are difficult to capture, EPA has identified a number of incidents of harm to fish and aquatic animals, birds, mammals, bees, and crops that could be prevented under the revised certification rule (Ref. 1). See the Economic Analysis for this rule for more information on human health and ecological incidents stemming from RUP use (Ref. 1).

In light of the incidents discussed above, EPA is updating the certification rule to ensure that RUPs can continue to be used without posing unreasonable adverse effects to human health or the environment. EPA's decision to register products as restricted use rests in part on an assumption that applicators will be sufficiently competent and professional that they can be relied upon to make responsible choices and properly follow all labeling instructions. When labeling instructions are followed, RUPs can be used without unreasonable adverse effects. EPA expects the revised rule to reduce human health and environmental incidents related to RUP use by strengthening the standards of competency for certified applicators, training noncertified applicators on pesticide safety, and establishing a maximum certification period and criteria for recertification programs. These changes will provide better assurance that certified applicators and those under their supervision will generally have a higher level of competency, and therefore more carefully follow pesticide labeling instructions and take proper care to prevent harm.

iv. Inadequate protection for noncertified applicators of RUPs. The existing rule does not require noncertified applicators using RUPs to receive specific instruction on how to protect themselves, their families, other

persons and the environment from pesticide exposure. Although little demographic data exists on this group, in industries including but not limited to agriculture and ornamental plant production, the profile of the population appears to be similar to that of agricultural pesticide handlers under the WPS. Both groups are permitted to mix, load, and apply pesticides with proper guidance from their employer or supervisor. Agricultural handlers under the WPS only use pesticides in the production of agricultural commodities; noncertified applicators may use pesticides in any setting not prohibited by the labeling. In order to mix, load or apply RUPs, however, all noncertified persons, including agricultural handlers, must be working under the direct supervision of a certified applicator. Many noncertified applicators work far from their supervisor, and exercise considerable independence. Although these noncertified applicators do not need to have the same level of competency as the supervising certified applicator, they nevertheless must be sufficiently competent to use RUPs in a manner that will not cause unreasonable adverse effects to themselves, the public, or the environment. The existing certification rule does not have specific standards on which noncertified applicators must receive instruction in order to prepare them to use RUPs. EPA identified six incidents from 2006 to 2010 where noncertified applicators experienced high severity health impacts from working with RUPs (Ref. 1). These adverse health effects were largely due to the noncertified applicators' lack of understanding about the risks posed by the RUPs they were applying, proper application procedures and techniques, and labeling instructions.

Under the WPS, agricultural handlers must receive training that covers, among other topics, hazards associated with pesticide use; format and meaning of pesticide labeling; and proper pesticide use, transportation, storage, and disposal. 40 CFR 170.230(c)(4) and 170.501(c)(2). Agricultural handlers also must have access to the product labeling and any other information necessary to make the application without causing unreasonable adverse effects. EPA revised the WPS in 2015 to, among other changes, add content for agricultural handler training that covers proper use and removal of PPE and specific information on fitting and wearing respirators to ensure agricultural handlers are protected adequately and understand how to

follow all relevant labeling provisions (Ref. 36).

Like agricultural handlers, some noncertified applicators may face challenges, such as not speaking or reading English that could put them at greater risk of pesticide exposure. They may bear risks from occupational pesticide exposure because they work with and around pesticides on a daily basis, language and literacy barriers may make effective training and hazard communication challenging, and economic hardship may make them reluctant to question instructions. Under the principles of environmental justice, EPA recognizes the need to reduce the disproportionate burden or risk carried by this population.

Noncertified applicators must receive adequate instruction on understanding and following pesticide labeling to ensure that RUPs are used in a manner that will not cause unreasonable adverse effects to human health or the environment. Additionally, noncertified applicators must have sufficient information in order to protect themselves, others, and the environment before, during, and after pesticide applications. Because of the similar risks faced by agricultural handlers under the WPS and noncertified applicators under the certification rule, EPA has strengthened the standards for noncertified applicators to include provisions comparable to the agricultural handler training requirements under the revised WPS and to ensure that the training is provided in a manner that the noncertified applicators understand, including through audiovisual materials or a translator if necessary.

v. Uneven regulatory landscape. EPA assumes a minimum standard level of competency of RUP applicators as part of the pesticide registration and ongoing review processes, and registers RUPs based on the minimum standard of competency. States, however, may adopt additional requirements as long as they meet the minimum standards established by EPA. The standards for exams and private applicator competency standards in the existing rule lack sufficient specificity sufficient to ensure an acceptable level of competency. The lack of specificity in the existing rule has resulted in States adopting differing standards, some of which do not match EPA's expectation regarding the minimum level of competency of a certified applicator.

For example, in 2006, EPA issued guidance on its interpretation of exams in the existing rule. The guidance notes that EPA interprets any exam administered to gauge applicator

competency as being a proctored, closed-book, written exam (Ref. 37). However, not all State certification programs are consistent with this interpretation; several States determine applicator competency based on open-book exams where candidates are allowed to bring in their own reference materials. EPA is concerned that this process compromises exam security. EPA has revised the existing rule to incorporate elements of the 2006 guidance and to clarify its expectations regarding administration of certification exams and training programs to ensure that the process for determining competency meets a standard national baseline.

The existing certification rule lists five points on which a person must demonstrate competency to become a private applicator. While these points cover the main topics that EPA expects an applicator to master before being certified to use RUPs, they do not cover in detail the necessary competencies for a person to use RUPs without causing unreasonable adverse effects. EPA must ensure that private applicators use RUPs competently. Commercial applicators must demonstrate core competency in pesticide use, such as reading and understanding the labeling, calculating application rates, wearing and caring for PPE, how to handle spills and other emergencies, and avoiding environmental contamination from pesticide use, as well as competency in specific categories of application. Private and commercial applicators have access to the same RUPs, and EPA expects that they should have comparable levels of competency related to understanding and following pesticide labeling. Almost 90% of States have adopted specific standards of competency for private applicators that are comparable to the core standards for commercial applicators. Those States that have not adopted such standards for private applicators may be certifying applicators who do not meet the level of competency that EPA believes is necessary to use RUPs. To address this situation, the final rule includes more specific standards of competency for private applicators—the revised standards include many concepts from the commercial core standards as well as competencies necessary to use RUPs in agricultural production.

vi. Outdated and obsolete rule provisions. The existing certification rule has one section regarding Tribal programs that is outdated and one section on government agency certification programs that is not necessary. The existing rule provides three options for applicator certification

programs in Indian country. Consultation with Tribes raised an issue with one of the existing options because it calls for Tribes that chooses to utilize a State certification program and rely on State certifications to obtain concurrence from the relevant States and to enter into a documented State-Tribal cooperative agreement. This option has led to questions about jurisdiction and the appropriate exercise of enforcement authority for such programs in Indian country. EPA has revised this option to allow Tribes to administer programs based on certifications issued by a State, a separate Tribe, or a Federal agency by entering into an agreement with the appropriate EPA Regional office. This will allow Tribes to enter into agreements with EPA to recognize the certification of applicators who hold a certificate issued under an EPA-approved certification plan without the need for State-Tribal cooperative agreements. The agreement between the Tribe and the EPA Regional office will address appropriate implementation and enforcement issues.

The existing rule includes a provision for a Government Agency Plan, a certification program that would cover all Federal government employees using RUPs. No such plan was developed or implemented by EPA or any other Federal agency. Subsequently, EPA issued a policy that allows each Federal agency to submit its own plan to certify its own employees to apply RUPs. Four Federal agencies have EPA-approved certification plans. To streamline the rule and codify the existing policy, EPA has deleted the existing section on a Government Agency Plan and replaced it with requirements consistent with the existing policy on Federal agency certification plans.

2. Surveillance data. i. Incident monitoring. Incident monitoring programs have informed EPA's understanding of common types of pesticide exposures and their outcomes. In 2007, EPA released a report detailing the coverage of all pesticide incident reporting databases considered by EPA (Ref. 38). When developing the proposed changes to the certification rule, EPA consulted three major databases for information on pesticide incidents involving applicator errors while using RUPs.

To identify deaths and high severity incidents associated with use of RUPs, EPA consulted its Incident Data System (IDS). IDS is maintained by EPA's Office of Pesticide Programs (OPP) and incorporates data submitted by registrants under FIFRA section 6(a)(2), as well as other incidents reported by

others directly to EPA. EPA's adverse effects reporting rule at 40 CFR part 159 allows the aggregation of individual events in some circumstances, meaning an incident with negative impacts to a number of individuals (e.g., persons, livestock, birds, pollinators) could be reported as a single incident. In addition to incidents involving human health, IDS also collects information on claims of adverse effects from pesticides involving plants and animals (wild and domestic), as well as detections of pesticides in water. EPA used this information to identify incidents involving the use of RUPs that have ecological effects. While IDS reports may be broad in scope, the system does not consistently capture detailed information about incident events, such as occupational exposure circumstances or medical outcome, and the reports are not necessarily verified or investigated.

The second database, SENSOR-Pesticides, is maintained by NIOSH and covers pesticide-related occupational injuries. EPA uses SENSOR-Pesticides to monitor trends in occupational health related to acute exposures to pesticides, to identify emerging pesticide problems, and to build and maintain State surveillance capacity. SENSOR-Pesticides is a State-based surveillance system with 12 State participants. The program collects most poisoning incident cases from:

- State workers' compensation claims when reported by physicians.
- State Departments of Agriculture.
- Poison Control Centers (PCCs).

A State SENSOR-Pesticides contact specialist follows up with workers and obtains medical records to verify symptoms, circumstances surrounding the exposure, severity, and outcome. SENSOR-Pesticides captures incidents only when the affected person has two or more symptoms. Using a standardized protocol and case definitions, SENSOR-Pesticides coordinators enter the incident interview description provided by the worker, medical report, and physician into the SENSOR data system. SENSOR-Pesticides has a severity index, based partly on poison control center criteria, to assign illness severity in a standardized fashion. SENSOR-Pesticides provides the most comprehensive information on occupational pesticide exposure, but its coverage is not nationwide and a majority of the data come from California and Washington State. Since 2009, SENSOR has been including information about how the incidents may have been prevented.

The third database, the American Association of Poison Control Centers,

maintains the National Poison Data System (NPDS), formerly the Toxic Effects Surveillance System. NPDS is a computerized information system with geographically-specific and near real-time reporting. While the main mission of PCCs is helping callers respond to emergencies, not collecting specific information about incidents, NPDS data help identify emerging problems in chemical product safety. Hotlines at 61 PCCs nationwide are open 24 hours, every day of the year. There are many bilingual PCCs in predominantly Spanish speaking areas. Hotlines are staffed by toxicology specialists to provide poisoning information and clinical care recommendations to callers with a focus on triage to give patients appropriate care. Using computer assisted data entry, standardized protocols, and strict data entry criteria, local callers report incidents that are recorded locally and updated in summary form to the national database. Since 2000, nearly all calls in the system are submitted in a computer-assisted interview format by the 61 certified PCCs, adhering to clinical criteria designed to provide a consistent approach to evaluating and managing pesticide and drug related adverse incidents. Information calls are tallied separately and not counted as incidents. The NPDS system covers nearly the entire United States and its territories, but the system is clinically oriented and not designed to collect detailed information about the circumstances causing the incident. Additionally, NPDS does not capture EPA pesticide registration numbers, a critical element for identifying the specific product and whether it was an RUP.

It is very likely that these databases significantly undercount the actual number of pesticide adverse effect incidents. Three studies showing undercounting of poison control data indicate the magnitude of the problem. The studies each focus on a specific region and compare cases reported to poison control with those poisonings for which there are hospital records. In all three cases, the studies indicate a substantial underreporting of poisoning incidents to poison control, especially related to pesticides (Refs. 13, 14, and 15).

Underreporting of pesticide incidents is a challenge for all available data sources for a number of reasons. Symptoms of acute pesticide poisoning are often vague and mimic symptoms with other causes, leading to incorrect diagnoses, and chronic effects are difficult to identify and track. There may not be enough information to determine if the adverse effects noted

were in fact the result of pesticide exposure and not another contributing factor because many incident reports lack useful information such as the exact product that was the source of the exposure, the amount of pesticide involved, or the circumstances of the exposure. The demographics of the populations that typically work with or around pesticides also contribute to underreporting of incidents. A more complete discussion of the underreporting and its effect on pesticide incident reporting is located in the Economic Analysis for this proposal (Ref. 1).

The data available do provide a snapshot of the illnesses faced by those applying RUPs and others impacted by the application and the likely avenues of exposure. Review of these data sources shows that certified applicators continue to face avoidable occupational pesticide exposure and in some instances cause exposures to others. EPA notes that RUPs can be used in a manner that does not cause unreasonable adverse effects when labeling directions for use are carefully followed. Deaths and illnesses from applicator errors involving RUPs occur for a variety of reasons, including misuse of pesticides in or around homes, faulty application and/or personal protective equipment, failure to confirm a living space is empty before fumigating, or unknowing persons accidentally ingesting an RUP that was improperly put in a beverage container. Common reasons for ecological incidents include failure to follow labeling directions, inattention to weather patterns at the time of application, and application equipment malfunction (Ref. 1). Generally, EPA's analysis showed that many of the reported incidents could be prevented with strengthened requirements for initial and ongoing applicator competency (certification and recertification), improved training for noncertified applicators working under the direction of a certified applicator, and knowledge of proper techniques for using specific methods to apply pesticides (Ref. 1).

ii. Agricultural Health Study. The National Institutes of Health (National Cancer Institute and National Institute of Environmental Health Sciences) and EPA have sponsored the Agricultural Health Study since 1994. This long-term, prospective epidemiological study collects information from farmers who are certified applicators in Iowa and North Carolina to learn about the effects of environmental, occupational, dietary, and genetic factors on the health of the farmers, pesticide applicators, and their

families. The study design involves gathering information over many years about the pesticide applicator and his or her family's health, occupational practices, lifestyle, and diet through mailed questionnaires and individual interviews. See <http://aghealth.nih.gov>.

The Agricultural Health Study includes approximately 52,000 private applicators, 32,000 spouses of private applicators, and 5,000 commercial applicators. All applicators participating in the study are certified (or licensed) in every State in which they work and in each category in which they make applications. All participants were healthy before enrolling in the study, allowing the researchers to consider a number of variables such as pesticide use, lifestyle, and diet.

The Agricultural Health Study is observational and considers a variety of factors including, but not limited to, pesticide use and exposure. Therefore, establishing a link between a specific health outcome and pesticide exposure can be difficult. However, it is possible to demonstrate statistical associations between a certain activity and an outcome. Using the information collected, the investigators working on the Agricultural Health Study have produced a number of articles relevant to the health and safety of pesticide applicators. See <http://aghealth.nih.gov/news/publications.html>. For instance, publications include information on characteristics of farmers who experience high pesticide exposure events and potential links between pesticide use and chronic health effects.

EPA considers the information from the Agricultural Health Study when appropriate, such as during a chemical reassessment. The data also provide information on applicator practices that lead to exposures, some of which EPA plans to address through the changes in this rulemaking.

3. Demographics. The profile of certified applicators of RUPs has shifted over time. The U.S. continues to move away from small agricultural production and more individuals seek professional pest control to address issues in their home or workplace. In 1987, around 1.2 million applicators held a certification, almost 80% of which were private applicators, and 20% of which were commercial applicators (Ref. 39). By 2015, the total number of certified applicators decreased to around 938,000 (Ref. 18). The respective proportions of private and commercial applicators changed more significantly—private applicators account only for 53% of the total certified applicator population and commercial applicators now make up about 47%.

In contrast to private applicators, who per FIFRA may only apply RUPs for the production of agricultural commodities on land owned by the applicator or the applicator's employer (with minor exception), commercial applicators work in a diverse array of situations. Commercial applicators apply RUPs in agricultural production, residential pest control, mosquito spraying for public health protection, industrial and food processing facilities, treating weeds along roadside and railroad rights of way, fumigating rail cars and buildings, maintaining lawns and other ornamental plantings, and controlling weeds and algae in waterways through pesticide application. Specific information on applicators across all industries or in each certification category is difficult to find and summarize. However, the broad trends indicate a decrease in agricultural applicators and an increase in urban and public health pest control.

Since publication of the 1974 certification rule, pesticide usage and reliance on hired pest control applicators have increased. The U.S. Bureau of Labor Statistics expects that “employment of pest control workers [will] grow by 15 percent between 2008 and 2018. . . . [because] more people are expected to use pest control services as environmental and health concerns and improvements in the standard of living convince more people to hire professionals, rather than attempt pest control work themselves” (Ref. 40).

4. Summary of the final rule. Units II and III describe the stakeholder engagement and reports highlighting the need to update the certification rule. In addition to stakeholder recommendations and public comments, EPA is revising the regulation to address State variability and to support EPA registration decisions. Each of these reasons for updating the rule are discussed in Unit IV.

As noted in Unit III, EPA has not updated the certification rule substantially in almost 40 years. However, many States have adopted updated standards for certification and recertification. As a result, State requirements for certification of applicators are highly varied.

If certification does not represent a uniform degree of competence, this diversity also could compromise EPA's ability to determine confidently that use of a pesticide product by certified applicators will not cause unreasonable adverse effects. In order to retain or expand the number and types of pesticides available to benefit agriculture, public health, and other

pest control needs, EPA is raising the Federal standards for applicator competency. By adopting strengthened and additional competency standards, the rule will provide assurance that certified applicators and noncertified applicators under their direct supervision are competent to use RUPs in a manner that will not cause unreasonable adverse effects. In the absence of such assurance, EPA would have had to seek label amendments imposing other use limitations that could be more burdensome to users, or even cancel certain uses.

Units V. to XX. describe the most significant of the changes to the existing regulation. Each discussion is generally structured to provide, where appropriate:

- A concise statement of the existing rule and proposed change.
- The final revised requirements.
- A summary of the comments received.
- EPA's responses to the comments received.

V. Private Applicator Certification

A. Private Applicator Competency Standards

1. *Existing rule and proposal.* The existing competency standards for private applicators cover five general topics. EPA proposed to amend the private applicator competency standards from the existing standards to include more specific information on pesticide application and safe use. EPA proposed to enhance private applicator competency standards covering: Label and labeling comprehension; safety; environment; pests; pesticides; equipment; application methods; laws and regulations; responsibilities for supervisors of noncertified applicators; stewardship; and agricultural pest control. EPA also proposed to include a specific competency requirement related to protecting pollinators under the "environment" heading. Finally, EPA proposed to require that private applicator competency include the ability to read and understand pesticide labeling.

2. *Final rule.* In the final rule, EPA has adopted the proposed private applicator competency standards with minor edits, except for the proposed requirement related to protecting pollinators. See Unit VI. The final regulatory text for private applicator competency standards is available at 40 CFR 171.105(a).

3. Comments and Responses

Comments. Some commenters expressed general support for EPA's

proposed competency standards for private applicators. They noted that private and commercial applicators have the same access to RUPs and should have the same general level of competency related to understanding and following pesticide labeling. A few commenters supported the adoption of the enhanced competency standards only for States that do not require private applicators to certify by passing a written exam, in order to improve the competency of applicators who certify by training. One commenter supported the adoption of the proposed private applicator competency standards to raise the bar in States that do not require private applicators to certify by passing a written exam because incidents that occur as a result of incompetent applicators can have an indirect impact on all applicators if particular pesticides are further restricted as a result.

Many commenters asserted that private applicators make more limited types of applications than commercial applicators (*i.e.*, they use fewer products and make pesticide applications to a narrow range of sites, so the frequency and potential risk of pesticide exposure for private applicators is lower than it is for commercial applicators). Some commenters asserted that private applicators are more invested in protecting the land and environment than commercial applicators because they are applying pesticides to their own land. For these reasons, commenters asserted that private applicators should not be required to meet the same competency standards as commercial applicators.

Many commenters requested that EPA eliminate the proposed private applicator competency standards or leave development of private applicator competency standards to the discretion of each State. They argued that the existing regulation and State programs adequately cover the necessary content to prepare private applicators to use RUPs in a competent manner. These commenters objected to EPA's proposal to align, for the most part, private applicator competency standards with the core competency standards for commercial applicators, noting that the universes of private and commercial applicators are distinct and their competency standards should be as well.

Many commenters noted that strengthening the competency standards for private applicators may increase the burden for certification, and as a result private applicators who do not use RUPs may forego certification. They assert that this would result in people

using non-RUPs without any training or competency in safe pesticide use.

Some commenters opposed the adoption of enhanced competency standards for private applicators because it could result in States having to pursue statutory or regulatory change. Commenters did not feel the potential benefit of enhanced competency standard would warrant the burden of such changes. Commenters also noted that some legislatures may be opposed to making such changes.

Some commenters also noted that the increased burden for certification could lead to farmers using commercial applicator services rather than obtaining a private applicator certification. Some commenters asserted that EPA cannot circumvent FIFRA by requiring private and commercial applicators to meet the same competency standards. Other commenters requested that EPA delete the private applicator competency standards and require private and commercial applicators both to meet the core standards that currently apply only to commercial applicators.

Some commenters suggested that the only way to ensure that applicators are competent is through requiring a written exam, but recognized that EPA cannot require people seeking certification as private applicators to pass a written exam. Some States questioned how EPA could require a demonstration of literacy without requiring private applicators to pass a written exam. One State that certifies private applicators through training noted that evaluating whether each candidate could read would place a significant burden on the private applicator certification program. The State suggested that the University of Nebraska at Lincoln's Label Exercise training module does more to establish an applicator's understanding of the labeling than a certification that a person can read English.

Some States requested that EPA include a grandfathering option to allow private applicators who hold valid certifications to retain them after the revised private applicator competency standards (including the ability to read and understand the labeling) are incorporated into State certification programs. These commenters noted that many applicators were originally certified by training, so reading comprehension was not measured. Commenters also expressed concern specifically about requiring all currently-certified private applicators to go through initial certification again to ensure they have the ability to read and understand the labeling. Some States expressed concerns about administering a two-tiered program if grandfathering is

allowed; they expressed concern at having to distinguish at recertification sessions between those applicators who obtained their initial certification by exam and those who obtained it through training to ensure each set of private applicators met the competency standards relative to their certification. One commenter expressed concern about the government taking away a certification previously issued without any evidence of misuse on the applicator's part.

Commenters made a range of general suggestions related to what EPA should adopt as private applicator competency standards. Some commenters noted that private applicator competency should cover elements such as: How a pesticide label is organized, what information the pesticide label contains, how to read and understand the pesticide label, knowing the difference between mandatory and advisory label language, applying pesticide in accordance with the label, recognizing environmental conditions, and recognizing poisoning symptoms and treatment. Some commenters suggested rather than increasing the standards and expected burden on applicators, EPA should ensure that high quality training on the existing competency standards is provided to improve applicator competency.

A few commenters discussed specific points in the private applicator competency standards. One commenter requested that competency standards include equipment maintenance and troubleshooting, such as how to safely unclog nozzles and clean spray equipment, as well as a safety topic covering specific information about worker protection and PPE. Another commenter suggested that EPA replace "Recognize local environmental situations that must be considered during application to avoid contamination" with "Understand how to prevent unwanted pesticide movement and pesticide drift." A few commenters suggested that EPA adopt Iowa's standards, which they noted include "laws and regulations, storage and safe handling, calibration of application equipment, safe application techniques, pesticide drift reduction, effects of pesticides on groundwater, personal protective equipment, pesticide labels, and pests and pest management."

A commenter noted that the proposed requirement for private applicators to demonstrate knowledge of specific agricultural pests would be burdensome. The commenter noted that there are a variety of pests that could affect agriculture and knowledge of all

would not make an applicator competent. The commenter questioned whether EPA or each State would determine what pests to include.

One commenter suggested an alternative to outlining specific private applicator competency in the regulation. The commenter recommended that EPA designate a specific general training document that outlines the suggested private applicator competencies, which could be included in the cooperative agreements between the States, university extension programs and EPA, and used in the process for updating certification exams.

Responses. EPA generally agrees with commenters who support a consistent level of competency related to understanding and following pesticide labeling for all applicators of RUPs, and has decided to finalize the proposed competency standards for private applicators as proposed with several minor changes. EPA generally agrees with commenters who note distinctions between private and commercial applicators, especially in the type and frequency of applications each group conducts. EPA acknowledges commenters' assertions that private applicators may be invested in protecting their land from pesticides. EPA notes, however, that all certified applicators must be competent to understand and follow the product's labeling in order to apply RUPs in a way that protects the applicator, other persons, and the environment, regardless of where or how they make the application.

EPA does not agree with commenters who argue that private applicators using RUPs should not be required to meet general competency standards with regards to safe use of pesticides that are similar to those for commercial applicators, or that private applicators should be subject to a different minimum competency standard depending on whether the State issuing the certification requires them to pass a written exam. Regardless of the certification method chosen by the certifying authority, FIFRA requires that EPA establish standards for certification that require persons to be determined competent to use and handle RUPs. 7 U.S.C. 136i(a)(1). Under the existing and revised rules, EPA establishes minimum federal standards for certification to use RUPs. States have and will continue to be able to develop and maintain their own certification programs as long as their programs meet or exceed EPA's requirements. EPA also disagrees with contentions that there are no problems with the private applicator competency standards in the existing regulation for

reasons discussed in the proposal (Ref. 17, pp. 51369–51372).

EPA agrees with commenters who requested that certifying authorities retain flexibility to adapt the competency standards to the needs of private applicators in their jurisdiction, as long as the program meets or exceeds EPA's standards. EPA recognizes that including a requirement for specific pest identification could result in significant burden on certifying authorities to develop materials covering all potential pests in agriculture, and on applicators to learn about specific pests that they may never encounter based on their crops or geography. Rather than memorization about specific pests, EPA believes applicators must have competency in how to identify pests in order to make proper applications.

In response to these comments, EPA has chosen not to include points in the competency standards related to pollinator protection and specific pest identification. For more information on EPA's consideration of pollinators in applicator competency standards, see Unit VI. In response to the commenter's suggestion that the proposed requirement for private applicators to demonstrate knowledge of specific agricultural pests would be burdensome, EPA has revised the private applicator competency standards under the "pest" heading in the final rule. EPA has replaced the proposed requirements with the following: "(4) Pests. The proper identification and effective control of pests, including all of the following: (i) The importance of correctly identifying target pests and selecting the proper pesticide product(s) for effective pest control. (ii) Verifying that the labeling does not prohibit the use of the product to control the target pest(s)." Further, EPA has deleted the provision in the proposal that would have required private applicators to demonstrate knowledge of specific pests of agricultural commodities. EPA does not intend these standards to determine which pests private applicators must be able to identify; rather, the standards in the final rule are intended to ensure that private applicators understand how to identify pests properly and how to use pesticides to control those pests. Each certifying authority has discretion to include identification of specific pests in the jurisdiction-specific private applicator competency standards. These general standards balance EPA's need to establish federal standards to ensure users of RUPs are competent with certifying authorities' needs to maintain flexibility to tailor certification

requirements to issues that affect their applicators.

EPA acknowledges requests to apply the same standards for private and commercial applicators, but notes that FIFRA requires EPA to maintain separate standards for private and commercial applicators. EPA disagrees with commenters who argued that EPA's proposed standards violate FIFRA's provision requiring that EPA establish separate standards for private and commercial applicators. 7 U.S.C. 136i(e). EPA developed the standards for private applicators through an analysis that was separate from that used to develop the standards for commercial applicators, and fully took into account the nature and circumstances of private applicators' use of RUPs. In the end, three principle aspects of the final rule distinguish private and commercial applicator competency standards. First, private applicator competency standards cover different content than commercial core competency standards, including information about the WPS and agricultural pest control. Second, private applicators can be certified by demonstrating competency covering the general private applicator standards, while commercial applicators may become certified only by satisfying competency standards covering the commercial core requirements plus at least one category's requirements. Third, for each of the areas of competency identified in the rule, the specific content will be established by the States and Tribes in their certification plans, and EPA anticipates that in those plans the breadth of scope, level of detail, or measures of competency for commercial and private applicators may differ to the extent appropriate to each area of competency.

EPA disagrees that strengthening the competency standards for private applicators will substantially increase the burden for certification. As discussed in the preamble to the proposed rule, almost 90% of States noted that their private applicator certification standards are already comparable to the existing core standards for commercial applicators (Ref. 18). The standards for private applicators are comparable to the core standards for commercial applicators, with important distinctions. The detailed standards in the final rule will assist in ensuring that certification adequately covers topics necessary to ensure that applicators are competent to use RUPs in a manner that protects themselves, other people, and the environment.

Because most States note that they already have private applicator competency standards that are comparable to the commercial applicator core competency standards, EPA disagrees that the updated competency standards are substantially more burdensome than existing State standards and disagrees that they will discourage a significant number of persons from seeking or maintaining certification as private applicators, whether or not they use RUPs. In any case, farmers have and will retain the choice to seek certification, to barter with other farmers certified as private applicators, or to contract with a commercial applicator to perform RUP applications.

EPA recognizes that the updated private applicator standards may require certifying authorities to pursue legislative or regulatory change, but given the comprehensive nature of this rule revision, this is unlikely to be the only aspect of the final rule that will require updates to existing laws and/or regulations. The overall benefits of the revised rule, including the updated private applicator competency standards, outweigh the burden of effecting legislative and regulatory change. EPA is committed to working with certifying authority regulatory agencies throughout the implementation process, including development of certification plans and associated legislative and regulatory changes.

In response to commenters' requests to "grandfather" private applicators with valid certifications into the certification program under a revised certification plan, EPA notes that certifying authorities may choose to allow all applicators who hold a valid private applicator certification under the existing certification plan to retain their certifications when revised certification plans are made effective. Only persons seeking initial certification as private applicators after revised certification plans are in effect will be required to meet the revised private applicator competency standards, including demonstrating the ability to read and understand the labeling.

EPA is not requiring that all private applicators currently certified under the existing rule complete the initial certification requirements again under today's revised rule because the burden would be significant and not outweighed by the potential benefits. There are over 480,000 persons currently certified as private applicators, and the costs associated with having each of them either attend a training course or preparing for and

taking a written certification exam would dramatically increase the estimated cost of this final rule. EPA recognizes that some private applicators hold certifications obtained by attending a training program that did not require any demonstration of the ability to read or understand the pesticide labeling, and, at the certifying authority's discretion, would continue to retain their certification under a revised certification plan as long as they continued to meet the recertification requirements. However, based on the anticipated burden on private applicators and certifying authorities, EPA is not requiring that all currently-certified applicators go through the initial certification process again as a condition of approval of a certifying authority's revised certification plan.

As noted in the preamble to the proposed rule and by several commenters, FIFRA prohibits EPA from requiring private applicators to take a written exam to obtain certification. EPA expects that as part of the initial certification process, certifying authorities will ensure that candidates have the ability to read and understand pesticide labeling. EPA leaves the mechanism of this determination to each jurisdiction's discretion, and will review the private applicator initial certification program as part of the evaluation of the revised certification plan. EPA notes that requiring persons seeking certification as private applicators to pass a written exam would satisfy the requirement in the final rule for private applicators to be able to read and understand the labeling. States that do not require private applicator certification by exam will need to explain their mechanism for ensuring that those who obtain private applicator certification have the ability to read and understand the labeling. For example, one commenter suggested that the University of Nebraska at Lincoln's Label Exercise training module could establish a person's ability to read and understand labeling. EPA would consider such programs as part of the revised certification plan, if adopted by the State as a mechanism to ensure private applicators have the ability to read and understand the labeling. EPA plans to develop guidance on and engage in discussions with certifying authorities about potential mechanisms that could ensure those seeking private applicator certification can read and understand the labeling without imposing significant additional burden on the certifying authority.

EPA expects that the initial demonstration of competency for

private applicators will include an assurance of each candidate's ability to read and understand the labeling. EPA does not expect that recertification programs will also include a verification of the applicator's ability to read and understand the labeling, and the final rule does not require States to include such a standard in their recertification programs. Therefore, all applicators should be able to attend the same recertification programs regardless of whether they earned their initial private applicator certification (although not a non-reader certification, see Unit V.C.) before or after the revised rule is issued and the revised certification plan implemented.

In response to general suggestions on the contents of private applicator competency standards, EPA notes that the private applicator competency standards in the final rule do cover pesticide labeling generally, environmental considerations, and recognizing poisoning symptoms and treatment. In response to the comments, EPA has added a sub-point under the labeling area of competency regarding "recognizing and understanding the difference between mandatory and advisory labeling statements." EPA disagrees that the existing competency standards adequately outline the competencies necessary for private applicators to use RUPs safely. See the preamble to the proposed rule for EPA's reasoning for amending the private applicator competency standards (Ref. 17, p. 51369).

In response to the comment requesting that competency standards include equipment maintenance and troubleshooting, such as how to safely unclog nozzles and clean spray equipment, as well as a safety topic covering specific information about worker protection and PPE, EPA notes that these topics are within the scope of the competency standards of the final rule. The final rule includes a competency area for application equipment maintenance and calibration at § 171.105(a)(6), and this competency area is reasonably interpreted as encompassing activities such as how to safely unclog nozzles and clean spray equipment. The private applicator competency standards covers worker protection under § 171.105(a)(8); the WPS is listed specifically as a regulation that must be addressed in the competency determination. PPE is included at § 171.105(a)(2)(vi), which covers, in part, "measures to avoid or minimize adverse health effects, including . . . [n]eed for, and proper use of, protective clothing and personal protective equipment."

In response to the comment that EPA replace "Recognize local environmental situations that must be considered during application to avoid contamination" with "Understand how to prevent unwanted pesticide movement and pesticide drift," EPA notes that the cited provision of the existing rule does not appear in the final rule, and that the final private applicator competency standards include "Prevention of drift and pesticide loss into the environment" at § 171.105(a)(7)(iv). Further, the final private applicator competency standards provide more detail about avoiding environmental contamination throughout, specifically at § 171.105(a)(3).

Although EPA did not adopt the language of Iowa's standards, as recommended by a few commenters, EPA notes that all of the elements of Iowa's standards suggested by commenters have corresponding provisions in the final private applicator competency standards.

EPA disagrees with the commenter's suggestion to designate a general training document outlining suggested private applicator competencies, rather than to adopt revised private applicator competency standards in the rule. A reference to a guidance document would not result in a binding requirement, and EPA has determined that regulation is needed based on its experience with the 2006 testing guidance (discussed in Unit IV.C.1.v). EPA has revised the private applicator competency standards in the final rule to ensure that all private applicators meet a baseline level of competency. EPA expects that these standards will be incorporated in certification exams and training programs during the implementation process.

B. Strengthen Private Applicator Competency Gauge

1. Existing rule and proposal. The existing rule requires certifying authorities to ensure that private applicators are competent and that the certification process uses a written or oral exam, or other method approved as part of the certification plan. EPA proposed that certifying authorities may certify private applicators either through a training program or by requiring candidates to pass a written exam. EPA proposed that a training course or exam must meet the proposed standards for private applicator certification, which are discussed in Unit V.A. of this preamble.

2. Final rule. The final rule requires persons seeking to obtain certification as a private applicator to complete a

training program approved by the certifying authority or pass a written exam administered by the certifying authority, as proposed. Both the training course and exam must cover the private applicator standards outlined in the rule at § 171.105(a) and discussed in Unit V.A. The final regulatory language for this requirement is available at 40 CFR 171.105(h).

3. Comments and Responses

Comments. EPA received a variety of comments on the options for initial certification of private applicators from States, farm bureaus, grower organizations, farmworker advocacy organizations, private citizens, and others.

Comments were mixed on EPA's proposal to require private applicators to certify by attending a training course or passing a written exam. Several commenters who supported the proposal noted that their certifying authority already requires private applicators to be certified in a manner that would comply with the proposal, if finalized, indicating that the proposed change would have no impact in that jurisdiction.

Some commenters suggested that EPA require all private applicators to be certified by passing a written exam; a few suggested that the private applicator certification exam should be the same as the core exam for commercial applicator certification. Commenters argued that allowing a non-exam option would not provide sufficient assurance of private applicator competency to use RUPs and would prevent EPA from establishing a clear certification standard.

Other commenters did not support EPA's proposal, noting that existing standards adopted at the State level for private applicator certification are sufficient. Some commenters reminded EPA that farmers would be taking time away from their operations to attend training and questioned the need to change what is occurring currently at the State level. Another commenter suggested that EPA evaluate the efficacy of existing State programs to see if there is any value in pursuing more stringent training and testing requirements for private applicators than those already in place.

Commenters provided information in response to EPA's question on the efficacy of training and comparisons between training and testing programs. Many of those commenting noted that training is an appropriate mechanism to transfer information to participants, but is not a way to gauge applicator competency. Some commenters recognized FIFRA's limitation on EPA's

authority to require private applicators to certify by passing a written exam, but stated that without such a barrier EPA should require all private applicators to certify by passing written exams. One commenter noted that training programs may change depending on the instructor or organization providing the training, while testing materials can be standardized to achieve the objectives of the certifying authority. One commenter supporting a requirement for certification by exam only stated its belief that some form of written exam is necessary for measuring competency, especially related to label comprehension, and suggested that EPA require those who certify as private applicators by attending training to complete some limited testing on labeling comprehension.

EPA requested comments on whether it should establish a minimum length for private applicator certification training sessions. States, worker/handler advocacy and legal assistance organizations, farm bureaus, and industry organizations responded to this question. Many of those commenters opposed EPA setting any minimum length for a private applicator training program. In addition, many commenters requested that EPA allow States to determine training content and length, to be included in the certification plan. One commenter noted that arbitrary universal training times are impossible to establish and defend, and noted that training content can only be established reasonably by a careful practitioner job analysis or detailed objective study of the needs of the trainees and the program. Several commenters expressed similar sentiments, noting that variability in agricultural crops and cropping systems means that training would vary greatly. Several commenters stated their belief that the programs in their States are sufficient. One commenter opposing a minimum training length noted that it would be meaningless if the training is poor quality. One commenter requested that if EPA does allow people to certify as private applicators by attending a training program, EPA specify the minimum length of training including expanded content.

Several commenters suggested that training programs that would result in private applicator certification should be at least a full day and a half in length, include hands-on instruction, and offer the opportunity for participants to ask questions. A commenter noted that one certifying authority's pre-certification training program for private applicator is one and a half days. Another certifying authority noted that its

current pre-certification training is approximately 11 hours, which is the time necessary to teach the material needed to pass the private applicator certification exam. The commenter noted that covering label comprehension, pesticide safety and PPE, equipment calibration and recordkeeping takes about seven hours, and the other four to five hours are spent on practical exercises, practice testing, quizzes, and interactive tools designed to enhance learning. The commenter highlighted that the expanded content of private applicator competency standards would require lengthening the training course to cover the additional topics.

One commenter requested that EPA allow online training programs to qualify as meeting the standard of training programs resulting in private applicator certification.

Responses. EPA is responsible for ensuring that applicators are competent to use RUPs in a manner that does not cause unreasonable adverse effects to human health or the environment. EPA recognizes that many certifying authorities already administer private applicator certification programs that meet the final standards by requiring those seeking private applicator certification to qualify by passing a written exam or to attend a training course. EPA agrees with commenters that written exams are a reliable way to gauge applicator competency, but notes that other non-exam methods to assure applicators are competent to use RUPs in a manner that does not cause unreasonable adverse effects also exist. Establishing more specific federal standards for private applicator certification can reasonably be expected to increase the likelihood that all private applicators will have the competency necessary to use RUPs in a manner that does not cause unreasonable adverse effects.

EPA disagrees with the commenter who suggested that further evaluation of existing State private applicator certification programs is necessary. EPA outlined the rationale for changing the options for private applicator certification in the proposal, which included a review of existing State programs and does not intend to do further evaluation at this time (Ref. 17, p. 51370).

EPA acknowledges that allowing people to certify as private applicators by attending a training session does not establish an objective certification standard, unlike a requirement to pass a written exam. EPA also acknowledges that FIFRA prohibits EPA from requiring candidates for private

applicator certification to take any examination to establish competency. This also prohibits EPA from requiring an exam that only covers labeling comprehension. EPA recognizes that certifying authorities may choose to administer the same exam to private applicators (for certification) and to commercial applicators (as part of the qualification for certification), but they are not required to do so.

EPA recognizes that training programs are less standardized than exams, and may vary depending on the instructor or organization providing the training. However, the final rule establishes basic content requirements that all training programs must cover. See Unit V.A. for discussion on the content of the standards for private certification. The final rule requires certifying authorities who allow people to qualify as private applicators by attending a training program that covers the private applicator competency standards in sufficient detail to allow the private applicator to demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides.

EPA has not established a minimum length for training programs that lead to private applicator certification. EPA generally agrees with commenters who noted that a standard training time would not guarantee applicator competency and that training quality is also important for ensuring applicators are competent. EPA recognizes that there is variability in agricultural crops and cropping systems across the country that would necessitate variations in training materials and depth of coverage of different topics. The final rule establishes a performance standard that a training program for private applicator certification must cover the competency standards in sufficient detail to provide the private applicator with the practical knowledge required by § 171.105.

The final rule adopts the minimum content requirements for training programs used for certification of private applicators with minor changes from the proposed rule as discussed in Unit V.A. of this preamble. Certifying authorities may tailor the training programs for private applicator certification to the needs of their audiences provided that the minimum content requirements specified in the final rule are met. The final rule does not include a requirement for hands-on instruction. EPA recognizes that hands-on instruction can be an effective way to transfer knowledge; however, EPA does not believe it is absolutely necessary for establishing private applicator competency. Certifying

authorities may choose to include hands-on elements in a training program for private applicator certification, which would be included in the certification plan and approved by EPA. Although the final rule does not require hands-on instruction for candidates seeking private applicator certification, EPA encourages certifying authorities to use a variety of approaches to encourage engagement and participation in training sessions.

EPA notes that nothing in the final rule precludes certifying authorities from using online training for private applicator certification programs. However, EPA notes that all programs must meet the standards outlined in § 171.105(h), which includes a requirement for candidates for private applicator certification to present a valid, government-issued photo identification (or other form of similarly reliable identification authorized by the certifying authority) to the certifying authority. See Unit IX. for a discussion of the final requirements regarding exam security and effectiveness.

C. Eliminate Non-Reader Certification for Private Applicators

1. *Existing rule and proposal.* The existing rule allows non-readers seeking certification as private applicators an option for obtaining a product-specific certification, known as the “non-reader” certification option. 40 CFR 171.5(b)(1). This provision allows the certifying authority to use a testing procedure approved by the Administrator to assess the competence of the non-reader candidate related to the use and handling of each individual pesticide for which certification is sought. This generally means that someone has explained the labeling to the non-reader and the non-reader answers questions on the same labeling asked by the certifying authority staff. The person seeking certification is not required to demonstrate the ability to read pesticide labeling. EPA proposed to delete this provision of the rule and to require that private applicator competency include the ability to read and understand pesticide labeling.

2. *Final rule.* EPA is finalizing this aspect of the rule as proposed, eliminating the provision that allows non-readers to obtain a product-specific private applicator certification.

3. Comments and Responses

Comments. Many commenters supported elimination of the non-reader certification option for private applicators. Commenters generally supported the EPA’s proposal to require explicitly that those certified to apply

RUPs be able to read and understand pesticide labeling. Some commenters noted that RUPs present higher risks to human health and/or the environment; therefore, the applicator’s ability to read and understand the labeling is critical to ensuring that the products are used properly. One State commenter highlighted that the labeling is the chief means by which EPA and State regulatory agencies communicate how to use RUPs in a way that does not result in unacceptable risks to human health and the environment, underscoring the importance of only certifying applicators who can read and understand RUP labeling. The same commenter argued “that providing a certification for the use of RUPs to individuals whom [sic] are not able to read the required labeling would compromise [EPA’s] statutory mandate to prevent unacceptable risk to human and environmental health.” A few commenters noted that labeling may change frequently and applicators need to be able to read the labeling in order to use the products safely. A few States supporting elimination of this provision noted that they will need to adjust their State laws or regulations to reflect the deletion.

Most States that commented on this provision noted that the elimination of the non-reader certification option would not cause hardship in their States because many have already eliminated this provision through State law. Some commenters acknowledged that eliminating the provision may result in some persons who currently hold non-reader certification not being able to renew their certification; however, they could retain the option to use RUPs under the direct supervision of a certified applicator. Many commenters suggested that EPA allow grandfathering of applicators currently certified under the non-reader certification option. One commenter noted that if the non-reader certification program were administered properly, there would not be a need to grandfather applicators because the certification should be good only for a single growing season or one year.

A few States noted that they offer accommodations to those seeking certification as private applicators under the Americans with Disabilities Act (ADA), 42 U.S.C. 126. For example, one State commented that it offers the option of taking the exam by having someone read the exam and answers, but not assistance with determining the correct answer. Another State provides accommodations in the form of untimed examinations but does not provide any accommodations to assist with reading or comprehending the exam because

both are essential elements of applicator certification.

One commenter requested that EPA define “non-reader,” noting that many farmworkers and pesticide handlers may be literate in languages other than English.

One commenter asked whether States would retain the option to certify private applicators through training or whether States would be required to administer a written closed-book exam after completion of the training program.

One commenter noted that to ensure that applicators can read and comprehend labels, written exams should be administered in English because a majority of RUP labeling is available only in English.

Responses. EPA agrees with commenters who support elimination of the option for a “non-reader” certification to use RUPs. EPA agrees with commenters that an applicator’s ability to read and understand the labeling is critical to ensuring that these products are used properly. EPA and States do use labeling to communicate to the applicator important information on using the pesticide in a manner that will not result in unreasonable adverse effects to human health or the environment. Labeling can change frequently, and an applicator must be able to read and follow the labeling that accompanies each product he or she uses. EPA designates pesticides as RUPs because they present a higher risk to human health or the environment than non-RUPs if not used according to the labeling directions, and requires those using RUPs to be certified as competent or working under the supervision of a certified applicator. RUPs can be used without unreasonable adverse effects when labeling instructions are followed. The certified applicator’s ability to read and understanding labeling is an essential element of the applicator’s competency.

EPA acknowledges that many States have already eliminated the limited or non-reader option for certification, so the impact of eliminating this option from the federal regulation should be small. EPA recognizes that eliminating this option for certification may impact applicators in States that currently offer this type of certification for private applicators.

EPA notes that elimination of the non-reader certification would only impact those applicators who received a non-reader certification to use a single product. Under the final rule, jurisdictions that currently permit this type of certification can continue to offer it until a revised certification plan

has been approved by EPA. See Unit XX. on implementation. Upon approval and implementation of a revised certification plan, applicators will no longer be permitted to obtain a non-reader certification. Applicators who have a non-reader certification at the time a revised certification plan is made effective will have three choices to have RUPs applied. One, the person may improve his or her reading sufficiently to satisfy the certification authority's requirements and obtain a private applicator certification. Two, the person may use RUPs under the supervision of a certified applicator. Three, the person may hire a commercial applicator or barter with a private applicator to have RUPs applied to his or her property.

EPA acknowledges that certifying authorities may already offer accommodations to disabled candidates for certification, and reminds certifying authorities that they must comply with the ADA, 42 U.S.C. 126. However, inability to read is not in itself a disability under the ADA. EPA suggests that certifying authorities work with their offices of legal counsel to determine what accommodations may be made for disabled persons seeking certification under their existing rules and under the revised requirements.

As discussed in Unit V.B., the final rule allows certifying authorities to certify private applicators through either completion of a training program or passing a written exam, and each process must meet the revised competency standards.

EPA recognizes that the majority of RUP labeling is only available in English and suggests that exams be given in English. However, EPA has chosen not to require that certification exams be administered in a specific language because labeling may be offered in different languages and label translation tools may be available to pesticide applicators. EPA recognizes that each certifying authority is in the best position to determine whether the exam should be offered in any language other than English.

VI. Pollinator Issues in Private and Commercial Competency Standards

A. Existing Rule and Proposal

The existing competency standards for private applicators cover five general topics. The current general or "core" competency standards for commercial applicators cover nine topics with specific subpoints under each topic. EPA proposed to add to both private and commercial applicator competency standards a specific requirement related to protecting pollinators under the

"environment" area of competency. EPA also requested comment on whether the commercial category for agricultural—animal pest control adequately covered the competencies necessary to treat bee hives.

B. Final Rule

EPA has decided not to add a specific requirement related to protecting pollinators to either private or commercial applicator competency standards. EPA also has decided not to incorporate any specific competency standards related to treating bee hives.

C. Comments and Responses

Comments. Some commenters expressed general support for adding a point on protecting pollinators to applicator competency standards. Some commenters noted that the addition of such a point would work in conjunction with State-managed pollinator protection plans and specific pesticide product labeling requirements to protect pollinators.

Many commenters, including certifying authorities, university extension programs, applicator organizations, grower organizations and others, requested that EPA not include any specific point in the competency standard related to pollinator protection. Some commenters noted that adding such a specific point to general competency standards would open the possibility for adding a number of specific points related to special interests that may not be applicable to all applicators or in all States. They argued that States and university extension programs should have flexibility to address specific topics that are relevant to their applicators under the broad headings of following pesticide labeling and protecting the environment.

Further, many commenters noted that pollinator protection is already addressed under the certification program and in other ways. They reminded EPA that competency standards already cover pesticide labeling and avoiding harm to non-target organisms. They also noted that EPA's addition of specific information about avoiding harm to pollinators to pesticide labeling has occurred and is a quicker process than updating regulations. They also noted that State-managed pollinator protection plans are being developed to address potential harm to pollinators. Lastly, some commenters suggested that emerging issues, such as potential harm to pollinators from pesticide applications, are better addressed in recertification programs where the most current

information about updated labeling requirements can be shared with applicators.

Some commenters responded negatively to EPA's question on whether the agricultural-animal pest control category adequately covers the competencies necessary to treat bee hives. Some commenters noted that bees are not agricultural animals. Commenters also noted that if bee hives were treated with RUPs, it is likely they would be fumigated, and therefore those with a certification to perform fumigation, not agricultural-animal pest control, should perform the application. Commenters also requested that EPA avoid including minor, species-specific competency standards, such as treating bee hives, in the rule.

Response. EPA agrees with commenters' request not to include specific competency standards related to protecting pollinators. EPA is convinced by commenters who asserted that the competency standards in the final rule under the environment heading to be aware of the impact of pesticide use and misuse related to "presence of fish, wildlife, and other non-target organisms" is sufficient to allow States to cover the impact of pesticide application on pollinators if relevant without requiring all applicators to be instructed specifically on avoiding negative impact to pollinators regardless of whether they may encounter them. EPA acknowledges commenters' assertions that enumerating many specific topics reduces certifying authorities' flexibility in developing training, exams, and other certification materials and incorporates niche concerns in what should be relatively general standards. Furthermore, EPA agrees that current efforts underway to protect pollinators, such as changes to pesticide labeling and development of State-managed pollinator protection plans, are appropriate ways to address this issue. EPA also agrees that competency standards should be as general and flexible as possible, allowing certifying authorities and university extension programs flexibility to address issues of importance and relevance to their applicators. For these reasons, EPA has chosen not to incorporate a specific point related to protecting pollinators into the competency standards for private or commercial applicators.

EPA agrees with commenters' input on the question of treating bee hives and inclusion in the agricultural-animal pest control category (in the final rule, this category is called livestock pest control). EPA agrees that including treatment of hives under agricultural animal is not

appropriate. Therefore, EPA has chosen not to add treatment of bee hives to the competency standards for any pesticide applicator certification category. Commenters noted that few RUPs may be used on bee hives. To use any RUP to treat bee hives, an applicator must be certified, which means the applicator has demonstrated competency to apply RUPs; in particular, the certified applicator has demonstrated competency to read and understand pesticide labeling. EPA communicates to applicators information related to protecting bees and other pollinators through labeling.

EPA notes that under the final rule, certifying authorities may adopt a specific certification category for applicators treating bee hives, including establishing a limited use category. EPA expects there are few applicators using RUPs to treat bee hives and there are a very limited number of products. EPA acknowledges that this use pattern does not fit precisely under any existing certification category. See Unit VII.B. for more information on the addition for certifying authorities to adopt limited use certification category.

VII. Establish Additional Categories for Commercial and Private Applicators

A. Establish Application Method-Specific Categories for Commercial and Private Applicators

1. *Existing rule and proposal.* The existing rule has no categories for private applicators. For commercial applicators, the existing rule has 11 pest control categories, although it does not have application method-specific categories.

EPA proposed to establish three new application method-specific categories for private and commercial applicators: Soil fumigation, non-soil fumigation, and aerial application. For commercial applicators, EPA proposed to require applicators seeking certification in an application method-specific category to hold at least one concurrent certification in a relevant pest control category.

2. *Final rule.* The final rule establishes three additional categories for commercial and private applicators: Soil fumigation, non-soil fumigation, and aerial application. Certifying authorities may adopt any of these categories that are relevant in their jurisdiction. Under the final rule, certifying authorities may opt to combine the soil and non-soil fumigation categories into a single general fumigation category. Commercial and private applicators using the application methods covered by these categories must obtain the

relevant certification. However, the final rule does not include the proposed requirement for commercial applicators to hold a concurrent certification in a related pest control category in order to obtain certification in a soil fumigation, non-soil fumigation, or aerial application category. Rather, the final rule permits certifying authorities to certify persons as commercial applicators in a soil fumigation, non-soil fumigation, or aerial application category if they pass the core exam and an exam covering the relevant application method category standards. Likewise, private applicators seeking to apply fumigants or use aerial equipment to make applications must obtain a certification in the category relevant to the application method in addition to their general private applicator certification.

To simplify the rule, and because EPA has relaxed the proposed requirement for commercial applicators to hold certifications in both an application method-specific and pest control category, EPA has combined the current pest control categories and the proposed application method-specific categories and refers to them collectively as categories in the final rule. Similarly, the proposed application method-specific categories for private applicators are identified as categories in the final rule.

The final regulatory text for the additional commercial applicator categories is located at 40 CFR 171.101(m)–(o). The final regulatory text for the additional private applicator categories is located at 40 CFR 171.105(d)–(f).

3. Comments and Responses

Comment. Many States and some farm bureaus expressed concern that EPA's proposal intended that every entity with a certification program would be required to adopt the soil and non-soil fumigation and aerial categories, even if there were no applicators using that application method in the jurisdiction.

Response. EPA does not intend to require certifying authorities to adopt the proposed soil and non-soil fumigation and aerial categories unless the application method is used to apply RUPs in that jurisdiction. The final rule clarifies this distinction. As with the proposal, §§ 171.303(a)(2)(i) and 171.305(3)(i) of the final rule clearly state that a certifying authority may omit any unneeded certification categories.

Comment. Many States opposed a requirement to adopt the soil and non-soil fumigation and aerial categories for private and commercial applicators,

preferring that each State independently determine if they are needed on a State-by-State basis. Several commenters, including some states and retailers, supported the soil and non-soil fumigation and aerial categories for both private and commercial applicators, noting that these uses present risks and require specialized training.

Response. EPA disagrees with comments recommending that EPA let individual certifying authorities decide whether fumigation and aerial application of RUPs require specific demonstrations of competency. These applications require specialized skills and present unique risks. EPA believes that establishing specific competency standards for certification of applicators applying RUPs by fumigation or aerial application will provide more consistent levels of competency among applicators using these methods. Because several certifying authorities have already adopted these categories and have implemented them successfully, EPA concludes that, where applicators use these application methods to apply RUPs, demonstration of their competency through certification in the soil and non-soil fumigation and aerial categories is an appropriate means of preventing unreasonable adverse effects.

Comment. A number of States and a national organization for State pesticide regulatory agencies expressed concern about the proposed requirement for commercial applicators using soil and non-soil fumigation and aerial application to obtain both an application method-specific category certification and certification in a relevant pest control categories (*i.e.*, concurrent certification) because the existing standards for core and the proposed standards for application method-specific categories adequately cover pest control topics. These commenters noted that in some States that already require certification in one or more of the three categories, applicators are allowed to demonstrate their competency in regard to the appropriate pest control category or categories through core or application method-specific category exams.

Some of these States asked that EPA consider allowing States to continue administering existing programs where the pest control component is integrated with soil and non-soil fumigation and aerial category certification if such programs provide protection equivalent to what is required by EPA. Several States, farm bureaus, and university extension programs supported allowing commercial applicators to become certified in soil and non-soil fumigation

and aerial categories without certification in any particular pest control category (“stand-alone certification”). One such commenter—a mosquito abatement district—explained that agricultural aerial applicators are needed to supplement public health applicators under some conditions. This commenter expressed concern that these applicators would decide, based on the additional burden of certification, not to certify in the public health category, and their limitation to agricultural sites would impair the district’s ability to protect residents from insect-borne diseases. Two States opposed stand-alone certification for commercial applicators in the soil and non-soil fumigation and aerial categories, based on an assumption that applicators would not be tested for competency on core pest control topics.

Response. Information provided by the commenters has convinced EPA that commercial applicators seeking to apply RUPs by fumigation or aerial application can demonstrate competency that covers the necessary pest control information through passing the core competency exam and an exam covering the relevant category standards (*i.e.*, soil fumigation, non-soil fumigation and aerial application), rendering the proposed requirement to obtain concurrent certification in another relevant category unnecessary. The substantive content of the categories that is relevant to fumigation or aerial application can be adequately addressed through the combination of core competency and the competency standards of these new categories. Therefore, EPA has included all categories (existing and new) under the heading of “categories” in the final rule, rather than breaking them out into pest control categories and application-method specific categories. The final rule does not have a requirement for commercial applicators to hold a valid certification in any specific category to obtain certification in another category. Commercial applicators must pass the core exam and obtain certification in at least one of the categories specified in § 171.101, which includes both the pest control categories of the existing rule and the proposed application method-specific categories. In the final rule, private applicators seeking to use fumigants, sodium cyanide, or sodium fluoroacetate, or to apply RUPs aerially must obtain a general private applicator certification and in addition become certified in the relevant category. Because FIFRA limits private applicators to the production of agricultural commodities, the general

private applicator certification is focused on that sector and the rule does not include other pest control categories for private applicators.

Comment. Another concern raised by many States, farm bureaus, applicator organizations, academics, and university extension programs was the additional burden for recertification faced by applicators certified in one or more of the proposed additional method-specific categories. States and the extension programs were also very concerned about the additional burden on their programs and on applicators that would be generated if EPA finalized the recertification requirements as proposed, in combination with the requirements for the application method-specific and concurrent pest control categories. A few commenters were concerned that private applicators may opt to no longer certify or that there may be non-compliance.

Most States that commented—in opposition to or in support of the additional categories—noted that adding the categories would burden the State and the applicator. One commenter advised EPA that many States would need to revise State laws and regulations, mostly related to private applicators. States with a broadly inclusive commercial fumigation category would be required to establish two separate categories, and applicators would have to either reduce the scope of their applications or increase their existing certification burden. Some States would need to develop new training materials and exams, and hold additional training sessions. A few commenters suggested that EPA either develop the materials or fund States’ development of the materials. Some commenters noted that there are few applicators in their States using a particular application method, and that the burden on the States and extension services would be high to support those few applicators.

Response. The proposal included very specific requirements for recertification programs, including requirements for a maximum recertification interval of 3 years, a minimum standard for CEUs, and a defined length of active training time for each CEU. The increased burden for certified applicators to recertify with these additional application method-specific and concurrent pest control categories under the proposed changes was one of the most frequently raised concerns about the proposal. As discussed in Unit XIV, EPA revised the recertification requirements to be more flexible and to accommodate a broader range of approaches in recertification programs.

These changes should alleviate or greatly decrease the concerns about the potential burden on certifying authorities and applicators. Please refer to Unit XIV. for additional information about the final recertification requirements.

Also, EPA has not included in the final rule the proposed requirement for applicators who apply RUPs by fumigation or aerial application to obtain concurrent certification in both the application method-specific category and in each relevant pest control category, reducing burden on applicators to certify and recertify in those categories.

To accommodate certifying authorities with few applicators using fumigants and to reduce certifying authorities’ training burden, the final rule allows certifying authorities the option to combine the soil fumigation and non-soil fumigation categories into a single fumigation category. EPA expects this change will provide nearly the same level of protection against unreasonable adverse effects as the proposal, because a general fumigation category must cover the standards of competency for both soil fumigation and non-soil fumigation. Certifying authorities may opt to certify private applicators seeking to use RUPs through soil fumigation, non-soil fumigation, and aerial application in the corresponding commercial category.

In response to comments recommending that EPA provide certifying authorities with training materials and exams for the application method-specific categories, EPA notes that it has worked with State regulatory agencies, cooperative extension agencies, applicators, and industry to develop training manuals and exam item banks for soil fumigation and aerial application that certifying authorities can adopt directly or adapt for use in their certification programs.

Comment. Some States, a registrant organization, and an association that represents pesticide safety trainers said the requirement for a soil fumigation category would be redundant and confusing to applicators in light of the existing labeling requirements for training of soil fumigant applicators. Those States where private applicators must certify by passing an exam said they would prefer that applicators take the registrant-developed training rather than add a soil fumigation category. One State said that the labeling-required training for soil fumigation and fumigant management plans are a more effective approach than requiring a certification in a fumigation-specific category, especially for private

applicators. Another State expressed a preference for requiring compliance with the training requirement on the labeling for private applicators rather than requiring private applicators to certify because the State would require the private applicator to pass an exam for certification.

Response. EPA recognizes that the soil fumigant labeling that currently contains requirements for registrant-training may overlap with the establishment of soil fumigation categories. Under this final rule, certifying authorities must adopt the soil fumigation category or a general fumigation category if such applications are made in their specific jurisdiction. Where registrant-provided training meets some or all of the requirements for certification or recertification, certifying authorities may include the registrant-provided training in their proposed certification plans. Currently, some States have different options for applicators to be able to meet the labeling-required training requirements, which are provided on EPA's Web site: <http://www.epa.gov/fumigantraining>. EPA will work with the certifying authorities and affected registrants to address the concern about overlapping requirements and burden on applicators, and will support communication of the changes to soil fumigant applicators.

EPA appreciates that the training currently required through soil fumigant labeling offers applicators important information that they may not receive through examination. Under the final rule, certifying authorities have the option to certify private applicators through completion of a training program that covers the competency standards outlined in the rule.

Comment. One commenter recommended grandfathering in currently certified applicators making applications covered by the application method-specific categories. Under this recommendation, only those certified after the new categories are adopted would need to be certified in the additional categories.

Response. EPA is unclear on the commenter's recommendation. If an applicator currently holds a soil fumigation certification, EPA does not anticipate that the applicator would need to complete the initial certification for soil fumigation under the revised certification plan. Rather, assuming the certifying authority allows applicators to retain existing certifications when the revised certification plan is implemented, the applicator could retain his or her valid soil fumigation certification and comply with the

recertification requirements the certifying authority adopts for soil fumigation. However, if the applicator is only certified in agricultural plant pest control and performing soil fumigation under this certification, EPA would not consider the applicator's existing certification sufficient to consider the applicator certified in soil fumigation under the revised certification plan. The exam for initial certification would cover the competency standards specific to soil fumigation. Because soil fumigation presents different, and in most cases, greater potential for RUP exposure than other application methods if not performed properly, the final rule requires certification in the specific category to help ensure applicator competency. Upon implementation of a revised certification plan by the certifying authority, this applicator would need to obtain certification in a category covering the soil fumigation competency standards in order to continue performing soil fumigation.

Comment. A pesticide registrant requested that EPA clarify that the additional categories apply only to RUPs with fumigation or aerial application directions on their labeling.

Response. EPA confirms that the soil fumigation, non-soil fumigation, and aerial application categories established through this final rule apply only to applicators using RUPs that are labeled for soil or non-soil fumigation or who make aerial applications of RUPs. EPA does not require applicators who only apply non-RUPs to be certified, irrespective of the method of application; however, certifying authorities retain discretion to implement programs more stringent than the federal rule and many do currently require certification of all "for-hire" pesticide users (even if they only use non-RUPs).

Comment. Some certifying authorities commented that rodent control fumigants do not fit in either the soil or non-soil fumigation category, and asked for guidance on the category in which they should be included.

Response. Based on the labeling and use patterns of rodent control fumigants (e.g., they are treating burrows, which are spaces, rather than the soil), EPA anticipates that use of these products would require an applicator to be certified in a non-soil fumigation category. However, EPA notes that certifying authorities do retain discretion to adopt a category or subcategory and corresponding competency standards specific to rodent burrow fumigations, as well as to combine the soil fumigation and non-

soil fumigation categories into a single fumigation category.

Comment. A few certifying authorities, farm bureaus and a grower group said that the requirement for application method-specific categories was not well justified for private applicators. One such commenter stated that EPA has failed to demonstrate that there are additional public safety benefits where these categories are in use.

Response. EPA disagrees. Private applicators making fumigant applications use the same products as commercial applicators. Private applicators may use fumigant products less frequently than commercial applicators, but as a result may have less experience and skill using these products and applications which pose significant risks if not used according to the labeling. The products present similar risks to bystanders and the environment as those used by commercial applicators. RUPs applied aerially are no less prone to off-target drift if applied by a private applicator rather than a commercial applicator. As one certifying authority commented in support of the application method-specific categories for private applicators, "[this State] feels that private applicators should have extensive knowledge of these specialized methods of application."

In this final rule, EPA has strengthened the competency standards for private applicators to cover more detail than in the existing rule. The final competency standards for private applicators are similar to the commercial core standards because there is a basic level of competency that is necessary in order to apply RUPs without causing unreasonable adverse effects. This same reasoning compelled EPA to establish the requirement that private applicators certify in the application method-specific categories.

In response to the comment that EPA has not demonstrated that public health benefits have accrued where certifying authorities have required certification in these categories, EPA notes that existing databases are insufficient to draw many reliable conclusions about the relative effectiveness of different State's certification programs. EPA believes it is reasonable to expect improvements to applicators' competencies will generally result in improved health of the applicator, the public, and the environment.

Comment. One certifying authority asserted that the proposed aerial and non-soil fumigant categories would not be adequate to establish competency without subcategories, and

recommended that EPA establish method-specific competencies.

Response. EPA disagrees that subcategories are necessary to establish competency for applicators to perform non-soil fumigation or aerial application. The final rule establishes method-specific competencies for soil fumigation, non-soil fumigation, and aerial application. Absent more specific information about what subcategories would be needed to adequately establish competency and why they would be necessary, EPA declines to add subcategories under the non-soil and aerial application categories, as requested. EPA reminds the commenter that certifying authorities may establish subcategories under categories as needed to ensure applicator competency.

Comments. Some certifying authorities, one university extension program, and a farm bureau opposed the requirement for separate soil and non-soil fumigant categories for private applicators, with one commenting that they would not improve competency as compared to a single category. One certifying authority commented that existing private applicator non-soil fumigation certification and recertification requirements, with an emphasis on labels and inspections, are sufficient for competency with the application method-specific categories. Two commenters recommended improving label language on the affected products, instead of requiring States to establish method-specific categories. Some of these commenters also noted that changes to the States' categories would require legislative approvals.

Response. EPA has included in the final rule an option for certifying authorities to adopt a single fumigation category with competency standards covering, at a minimum, the federal competency standards for soil fumigation and non-soil fumigation. EPA will review each certifying authority's revised certification plan to determine whether the existing requirements satisfy the requirements of this final rule.

EPA disagrees with the commenters' request to improve label language in lieu of establishing specific soil and non-soil certification categories. Fumigant applications require specialized skills and present unique risks. EPA believes that establishing categories for certification of applicators performing fumigation or aerial application, and adoption of the associated competency standards, will improve the competency of applicators using these methods, and thereby reduce the likelihood of unreasonable

adverse effects. Because several States have successfully implemented these categories, EPA concludes that, in States where private applicators practice these application methods, demonstration of their competency through certification in the application method-specific category is an appropriate means of preventing unreasonable adverse effects.

EPA acknowledges that adopting additional categories may require the certifying authority to pursue regulatory or legislative change.

Comment. A few commenters, including the national organization representing State pesticide regulatory agencies, asserted that an aerial category for private applicators is unnecessary, due to the small number of applicators and because the industry is self-regulating and already federally regulated by the Federal Aviation Administration (FAA).

One commenter noted that, in their State, private aerial applicators are likely certified as commercial, and the federal aerial category for private applicators is therefore not needed. This commenter noted fewer drift complaints from aerial application in the past few years, as compared to drift complaints from ground applications. This commenter also opposed the proposed competency standard for aerial application, stating that State pesticide regulatory agencies and university extension personnel are not authorities on the operation of airplanes or their flight altitude or pattern.

Response. Although the FAA regulates agricultural aerial applicators, its focus is on flight risks rather than pesticide risks. EPA's concerns for aerial pesticide application are centered on the potential for off target application, spray drift, and bystander exposure. Despite the likelihood that there are a small number of private applicators using aerial equipment, the potential for risk and the need for competency in making proper application remains high for those applicators. The commenters have not provided evidence to support the contention that the aerial applicator industry is self-regulated or that such self-regulation adequately addresses the risk of aerial application of RUPs. EPA does not believe that the aerial application industry's self-regulation is an adequate substitute for the competency standards and determinations required in the final rule.

EPA is not opposed to certifying authorities requiring private applicators to meet commercial applicator criteria for aerial application certification. The final rule does not require certifying authorities to offer certification in

categories where demand is low. In response to the commenter opposed to the private applicator competency standard for aerial applicators on the grounds that States are not authorities on aviation, EPA reminds the commenter that neither is FAA an authority on pesticide risks. EPA's and FAA's requirements are complementary in regard to aerial application of pesticides. The provisions of this final rule are directly related to the application of RUPs, not general operation of the aircraft. Training and knowledge on the principles of aerial application to minimize drift and off-target movement of RUPs are critical competencies for applicators who apply RUPs aerially.

Comment. One State recommended reducing the number of application method-specific competencies listed in the proposal, stating that many, such as those covering pesticide labels and labeling and target pests, are covered in their core competency standards.

Response. EPA assumes the commenter is requesting that EPA allow a certifying authority to include some portion of the competency standards listed in certain categories in the core competency standards because there appears to be a duplication of some points (e.g., labeling requirements). For example, both commercial core competency standards and the competency standards for soil fumigation include requirements for the applicator to understand labeling requirements. However, EPA notes that the core and category competency standards are different based on context: Category-specific knowledge of labeling concerns common labeling provisions relevant to the products covered by the specific category (e.g., application to livestock, seed treatment, soil fumigation), while the core competency standards cover labeling generally (e.g., understanding the parts of labeling, where to find information, requirements for certified applicators). With the possible exception of Federal agencies (whose commercial applicators may be very specialized), EPA does not anticipate that a certifying authority would adopt into the commercial core competency standards requirements for all commercial applicators to have competency related to a specific category's standards. The certifying authority must specify in its certification plan that the competency standards for each category meet or exceed the competency standards in the rule. EPA will review each certification plan and the proposed categories to determine whether the necessary competencies are covered in a manner

likely to ensure that applicators are competent to use RUPs without causing unreasonable adverse effects.

Comment. Several commenters, primarily aerial applicator organizations and pesticide manufacturer organizations, expressed concerns for the characterization of aerial application as a “high risk” method. They state that aerial applicators are typically mature and experienced individuals who receive frequent, ongoing training to ensure competency, and applicators exhibit a high degree of professionalism. The commenter noted that aerial applicators prepare extensively prior to flight and are knowledgeable of proper procedures and safety. One applicator organization observed that the use of the term “high risk” places an undue potential for legal liability on the applicator and their customer.

Commenters preferred that the aerial application category be designated as “specialty,” “highly skilled,” or “complex” application method. Several of these commenters agreed that there is some risk associated with aerial application, but aerial applicators seek to use best practices to minimize or eliminate these risks.

Response. EPA has not characterized aerial application as a “high risk” application method in the final rule. However, both the proposed and final rules properly reflect the fact that aerial application presents different, and in most cases, greater potential for RUP exposure than other application methods if not performed properly, and therefore requires specialized training and experience.

Comment. One commenter found statements in the preamble in error. Those statements suggested that the national organization representing State pesticide regulatory agencies opposed EPA’s soil fumigant risk mitigation approach, which included requirements on labeling for applicators to receive registrant-provided, product-specific training. The commenter asserted that States were not opposed to the concept of relying on labeling to require applicator training for risk mitigation, but instead were concerned for the timeframe that EPA established to complete the work. Correspondence from a national pesticide safety trainers’ organization expressed concerns for the mandate for registrant training.

Response. EPA acknowledges that the intention of the statements originating from the national organization representing State pesticide regulatory agencies correspondence was to express concern for the aggressive timeline involved with the implementation of the labeling requirement for registrant-

provided training. EPA also acknowledges the correspondence from the national pesticide safety trainers’ organization expressed their concern with the requirement for the training that was required to be provided by pesticide registrants.

Comments. Two States mentioned the anticipated use of Unmanned Aerial Vehicles (drones) for pesticide applications. One commenter suggested that EPA define terminology and consider establishing a category for their use. A second commenter suggested that certification of applicators using drones could be accomplished under the existing certification program.

Response. EPA has only a nascent understanding of drone use in RUP application, especially as the field and other federal regulations related to drone use are developing and evolving quickly. EPA may revisit the issue of using drones for RUP applications and whether additional competency standards are necessary in the future, but in the meantime, it seems likely that RUPs applied by drone would be “applied by fixed or rotary wing aircraft” and thus be subject to the aerial applicator certification requirements of the final rule. Because the field is new and developing, EPA will not add a specific certification category or competency standards at this time; however, EPA may revise existing standards or add a new category to address this issue in the future if necessary. Certifying authorities may adopt their own categories, and EPA is willing to work with any certifying authority to develop competency standards for certifying applicators who would use this or other emerging technologies.

Comment. One certifying authority commented that the proposal to subdivide the fumigants by method of application and use site is contrary to FIFRA, 7 U.S.C. 136(ee), and sets a precedent for subdividing other categories by method of application, for example, hand pump sprayers, air blast sprayers, and hydraulic sprayers.

Response. The fumigation categories are divided into soil and non-soil on the basis of the site of application. Regarding the concern the commenter has for the proposed requirement for separate categories, EPA was convinced by States’ comments and has determined that certifying authorities may establish a single certification category for the fumigants, which encompasses the competency standards for both fumigation types. EPA does not at this time anticipate subdividing categories of use by application equipment type. EPA does not see any

inconsistency between the final rule and FIFRA (7 U.S.C. 136(ee)).

Comments. Several States, an organization that represents Tribal interests, and a farmworker advocacy organization responded to EPA’s request for comment on the need for a chemigation certification category for applicators who apply RUPs through irrigation systems. All certifying authorities who responded to this question opposed the alternative. Two certifying authorities noted that the category was not needed. One certifying authority where there is substantial use of chemigation responded that their private applicators are trained on this application method and there are questions on the certification exam. Two certifying authorities opposed the addition of a chemigation category because of applicator burden. Another certifying authority opposed adding a chemigation category, stating that the label addresses the need and the establishment of the category would burden the State. Another two certifying authorities did not support the additional category, and recommended instead an assessment of use of RUPs by chemigation while expressing concern for additional burden when combined with the proposed fumigation and aerial categories.

Two commenters supported the addition of a certification category for people using RUPs by chemigation. One of these commenters, a farmworker advocacy organization, noted that applicators need specific skills to use drip lines and there is a need for them to take precautions to prevent contamination of waters.

Response. In drafting the proposal, EPA reviewed certification plans and the available incident data but found that few certifying authorities had adopted a chemigation category, and chemigation is not disproportionately represented among reported incidents. In the proposal, EPA requested comment on adding an application method-specific category for chemigation to gather additional information for decision making. No certifying authorities supported the addition of chemigation as an application method-specific category. Based on these comments and the available information, EPA has concluded that, at this time, requiring chemigation-specific certification is unlikely to reduce risks enough to justify the associated burden, and therefore has not included a requirement for a chemigation category in the final rule.

B. Allow Certifying Authorities To Establish a "Limited Use" Category for Commercial Applicators

1. Existing rule and proposal. The existing rule has categories of certification for commercial applicators covering major types of pesticide applications. EPA proposed adding additional application method-specific categories covering particular ways that RUPs are applied. EPA requested comment on adding a "limited use" category for small numbers of applicators using RUPs in highly specialized or niche applications that do not fit under an existing or proposed category. Certifying authorities have expressed concern about the numbers of such applicators being too small to justify the cost of developing and offering written examinations meeting the criteria of § 171.103(a)(2) for these niche uses.

The existing rule and final rule require certifying authorities to use written exams to determine the competency of and issue certifications to commercial applicators. Under the existing rule and final rule, commercial applicators must pass written exams covering core competency standards and competency standards for at least one category. The costs of written exams for category certification is a significant obstacle to certifying commercial applicators who use a single product or very few products using specific application techniques that do not fit within other categories. Examples of niche applications are municipal sewer root control, use of biocides in hydraulic fracturing ("fracking") and wood preservation treatments. In the proposed rule, EPA discussed the option of allowing a "limited use" category that would allow certifying authorities to certify commercial applicators based on passing a written exam covering core competency and meeting specific additional standards established by the certifying authority related to the use of a specific RUP or small group of RUPs in a very narrow type of application sites. EPA considered and requested comment on whether to allow certification in the "limited use" category based on qualifications other than passing a category-specific exam. EPA discussed three alternatives to passing a category-specific exam: (1) The applicator could be required to comply with industry-provided training or certification requirements specified on the product labeling; (2) the applicator could be required to hold applicable State or Federal professional credentials; or (3) the applicator could demonstrate

competency as required by the product's labeling.

2. Final rule. EPA has chosen to add a provision to the final rule that would allow certifying authorities, at their discretion, to add "limited use" categories for commercial applicators. To add a "limited use" category, the certifying authority must establish specific competency standards and outline the process for ensuring that applicators demonstrate competency. An exception in 40 CFR 171.103(d) and 171.303(a)(4) allow the certifying authority to determine commercial applicator competency for the "limited use" category through a method other than a written exam fully conforming to § 171.103(a)(2). However, candidates for a "limited use" certification will be required to pass the written exam covering the core standards outlined at 40 CFR 171.103(c). But instead of passing a written examination to satisfy the State-established category-specific competency standards, candidates for a "limited use" certification may satisfy those standards by other means, which may include performance testing, individualized evaluations that do not necessarily meet the requirements of § 171.103(a)(2), other professional certification programs, or training and/or evaluation provided by third-parties such as pesticide registrants and other regulatory agencies. The certification plan's description of a "limited use" category must include information about how applicators would be recertified. The certifying authority must ensure that any limited use certification credential clearly identifies the limited set of RUPs authorized for purchase and use by the applicator. The regulatory text for allowing the development of a "limited use" category and outlining the exception to the requirement for commercial applicators to certify by passing a core and at least one category exam is available at 40 CFR 171.303(a)(4).

Comment. Four States, one private individual, and two industry organizations with applicators that use RUPs in specialized applications supported the addition of a "limited use" category for commercial applicators, in order to reduce burden on applicators, educators, and certifying authorities while assuring competency. Commenters noted that certifying authorities have difficulty developing valid exams and finding appropriate training for these users. Commenters also stated that, in those States, applicators must pass exams and take training not relevant to their niche applications or the State must develop and maintain an exam and training

program covering very limited, detailed content that is often applicable to very few people in the State. Most of the commenters supported the three proposed alternatives to address the category requirements, with one commenter supporting the option for certifying authorities to develop additional approaches. Four certifying authorities opposed the concept of a federal "limited use" category, stating that adopting a "limited use" category would increase burden, particularly on enforcement staff, who have to verify the alternative credentials.

Response. EPA recognizes that there are RUP uses that do not fit well within the categories outlined at 40 CFR 171.101 and that have small numbers of commercial applicators. Because of the small numbers of applicators, the per-applicator cost of developing and presenting testing and training materials is high and represents a burden on the certifying authorities and applicators. Materials, exams, and training may be difficult for certifying authorities to develop due to scant information, a small applicator pool with which to develop and validate exam questions, and limited expertise with these specialized applications. The substantive content used for certification in other categories may have little relevance to their work.

EPA is convinced by these comments supporting a "limited use" category and concludes that allowing certifying authorities the discretion to certify these applicators through an alternative mechanism, rather than by using the standard requirements to pass a core and category exam is appropriate. The alternative approach must accurately determine the applicator's competency in making these specialized applications, but may do so in a flexible manner that does not place excessive burden on the applicator or the certifying authority. The final rule allows certifying authorities the option to certify commercial applicators for niche uses without having to pass a written category exam conforming to § 171.103(a)(2). The final rule requires commercial applicators seeking "limited use" certification to satisfy the core competency standards, including the examination standards of § 171.103(a)(2), by passing a written core exam, in the same manner as other commercial applicators. The difference is the certifying authority's option to develop competency standards for the "limited use" category and to ensure the applicator's competency according to those standards through a process other than the written examination required by § 171.103(a)(2). Prior to this final

rule, EPA has relied on other methods to establish applicators' competency in the case of fumigants and predacides, where commercial applicators have been required to pass a core exam, category exam, and satisfy the labeling-mandated competency requirements. EPA believes that it is a viable approach to ensuring safe and effective applications of certain RUPs in very narrow scenarios, and would provide better flexibility for certifying authorities to address the needs of their applicators. Accordingly, the final rule provides that certifying authorities may include in their certification plans specific "limited use" categories for certification of commercial applicators through alternative processes (subject to EPA approval) that do not necessarily meet the examination standards of § 171.103(a)(2). Refer to §§ 171.303(a)(4) and 171.305(a)(5) for the regulatory text.

Under the final rule, certifying authorities must provide information about the "limited use" categories they plan to establish in their certification plans submitted to EPA. They must provide the related competency standards, as well as their approach to determine competency and to recertify commercial applicators in the "limited use" category. Certifying authorities must explain why it is not practical to include the specific product(s) and/or use(s) under any other existing category. The certifying authority is required to ensure that any certification credential clearly identify the limited set of RUPs an applicator holding a limited use certification is authorized to purchase and use.

In response to the concerns from States that a "limited use" category could be burdensome on State enforcement programs, EPA notes that certifying authorities are not required to establish a "limited use" category.

VIII. Establish Predator Control Categories for Commercial and Private Applicator Certification

A. Existing Rule and Proposal

The existing rule has no categories for private applicators. For commercial applicators, the existing rule has 11 categories but does not have specific categories for the RUPs for predator control, sodium fluoroacetate in a protective collar and sodium cyanide in a mechanical ejection device.

EPA proposed to establish a single predator control category, with two subcategories—one specific to sodium fluoroacetate and one specific to sodium cyanide. EPA proposed the predator control category to codify the competency standards established by

each product's labeling. EPA proposed to require that to use sodium fluoroacetate or sodium cyanide, an applicator would require certification in the specific category relevant to the product used.

B. Final Rule

The final rule establishes for both private and commercial applicators two predator control categories—one for sodium fluoroacetate in a protective collar and one for sodium cyanide in a mechanical ejection device. The final rule codifies the standards of competency mandated by the EPA orders (40 FR 44726 (September 29, 1975) and 49 FR 4830 (February 8, 1984)) that govern the use of these products.

The final regulatory text for commercial applicator predator control categories is located at 40 CFR 171.101(k)–(l) and 171.103(d)(11)–(12). The final regulatory text for private applicator predator control categories is located at 40 CFR 171.105(b)–(c).

C. Comments and Responses

Comment. Several States and a State association expressed concern that every jurisdiction would be required to adopt the two predator control categories, even if there were no applicators using that application method. Many certifying authorities pointed out that these products are not used in their jurisdiction. In some jurisdictions, applicators use one or the other predacide products, but not both.

Response. Neither the proposed nor the final rule requires certifying authorities to adopt categories covering the use of sodium cyanide or sodium fluoroacetate. Under the final rule, certifying authorities retain the discretion to adopt only the federal certification categories relevant to their jurisdictions. 40 CFR 171.303(a)(2)(i) and 171.305(a)(3)(i).

Comment. A number of States noted that risks to humans and non-target species from use of these products are great, as the products are highly acutely toxic to mammals and there are no antidotes. Most of these commenters believe that the labeling requirements are sufficient and that the proposed predator control categories are not needed. A few commented that sodium fluoroacetate and sodium cyanide are only for use by highly trained USDA Wildlife Services personnel, and should not be used by private applicators.

Response. EPA agrees that these products can pose unreasonable adverse effects on human health or the environment if not used by competent applicators carefully following the

labeling use directions and precautions. Currently, most of the regulatory requirements applicable to these products come from two administrative orders published in the 1975 and 1984. Codifying more of the content of those orders into this rule will provide greater transparency and provide certifying authorities and applicators improved access to information they need to ensure the products are applied by competent applicators.

EPA notes that use of predator control products is not necessarily restricted to USDA Wildlife Services personnel; they are also used by other certified applicators. Private applicators, legally permitted to use these products, are subject to the same labeling-mandated competency standards as are commercial applicators.

Comment. Two States recommended that EPA retain the existing commercial category number assignments in the final rule, instead of inserting the predator control category before the existing Demonstration and Research category. Commenters noted that certifying authorities retain information based on the federal category number, therefore changes to the category numbers would complicate the tracking of their historical information.

Response. The proposed rule inserted the predator control category into the commercial categories as number 10, displacing the Demonstration and Research category to number 11, with the intention of grouping the predator control category with the pest control categories. However, the order of the categories does not significantly affect the readability of the rule, so EPA will order the categories as the commenters requested. In the final rule, EPA has revised the order from the proposal so that Demonstration and Research is category 10 as it is in the existing rule.

Comment. One State supported EPA's intention to promote safer pesticide use by establishing predator control categories for private applicators, but expressed concern for the burden on that certifying authority. They expected that the changes would impact resources to revise rules, and stated that EPA should develop study guides and exams. This certifying authority also was concerned that private applicators would find it too difficult to obtain the additional licenses, and may not be able to protect their commodities as a result.

Response. EPA appreciates the concern raised for the burden on certifying authority resources, and for the potential that private applicators may lose access to these RUPs to protect their investments. However, EPA notes that private applicators using these

products must already comply with the use restrictions and competency standards on the labeling, and can reasonably be expected to achieve certification to equivalent requirements in a certification context. Should they be unable to demonstrate competency in the relevant predator control category, their access to and use of these highly acutely toxic pesticides would be to barter with other farmers certified in this category, to hire commercial applicators, or to obtain the help of State or Federal wildlife officials.

Comment. A federal government agency commented that they were not opposed to codifying the labeling requirements for sodium fluoroacetate and sodium cyanide, but asked for clarification on how applicators would demonstrate competency. They stated that APHIS WS provides specific training for applicators in many States, because certifying agencies do not have the information or training staff with relevant expertise in predator control. They stated that if applicators were required to demonstrate competency by passing a closed-book exam for certification and obtaining six CEUs for recertification that this would be difficult for States to implement for the small numbers of applicators. USDA APHIS preferred to keep things as they are, with this agency providing training for applicators in many jurisdictions.

Response. Federal agencies administering certification plans must comply with any State- or Tribe-specific certification requirements when persons certified under the Federal agency certification plan make applications in a specific State or part of Indian country. Neither the proposed rule nor the final rule requires applicators to obtain certification by completing both a training program and passing a closed-book exam. Under the final rule, commercial applicators would be required to certify by passing the core exam and the appropriate category exam, and therefore, APHIS-provided training without examination would not by itself satisfy the requirements for initial certification. Private applicators seeking to use one or both of the predator control products covered would be required to hold a valid private applicator certification and to obtain certification in the relevant category by passing a written exam or completing training, depending on the certifying authority's requirements for private applicators. The certifying authorities will have the discretion to decide whether to accept APHIS-provided training as satisfying some or all of the requirements for initial

certification or recertification in the predator control categories.

The proposal included very specific requirements for recertification programs, including a minimum standard for CEUs per category recertification period. The final rule provides more flexibility to accommodate different approaches by certifying authorities and does not require applicators to complete a specific number of CEUs or hours of training in order to maintain their certification. Rather, the final rule establishes a framework under which certifying authorities may develop a recertification program within their jurisdiction. Recertification for both private and commercial applicators would be consistent with the certifying authority's requirements. Each certifying authority has discretion regarding whether APHIS-provided training is an acceptable component of the certifying authority's recertification program. See Unit XIV, for more discussion on the revisions to the recertification requirements.

IX. Security and Effectiveness of Exam and Training Administration

A. Overview and General Comments

1. Overview. In order to address concerns that administration of pesticide applicator examinations and trainings currently affords opportunity for cheating or fraud, EPA proposed provisions to ensure the security and integrity of examinations and training sessions. EPA proposed that all examinations for certification or recertification be closed-book and proctored. EPA also proposed that certifying authorities verify the identities of candidates seeking certification or recertification by examination or at training sessions. Based on comments received, EPA is revising the proposed examination and administration requirements in the final rule, as discussed in detail in the responses that follow.

2. Comments and Responses

Comments. A number of commenters offered general support for EPA's efforts to improve the security and effectiveness of the certification and recertification examinations and training sessions by requiring candidates to verify their identity and by requiring written examinations to be closed-book and proctored. Some certifying authorities noted that they already require examinations to be closed-book and proctored.

Other commenters stated the belief that the new requirements to ensure the

security and effectiveness of examination and training administration would likely place additional burdens on certifying authorities. One commenter noted its expectation that as certifying authorities alter their programs to comply with the proposed provisions, candidates would be left with fewer options for certification and recertification exams and trainings. Some certifying authorities provide the option for private applicators to complete a take-home workbook to obtain certification; according to one commenter, the proposed requirement for closed-book, proctored exams would effectively prevent that option.

Some commenters stated that the proposed provisions are too prescriptive, arguing that a requirement to ensure a certifying authority has implemented examination security provisions as a part of its certification plan should suffice. Some commenters suggested that EPA should require certifying authorities to establish a certification security system that verifies the applicator's identity and provides for examination security, and that any additional examination security requirements would be unnecessary. Another commenter argued that certifying authorities have been administering examinations for years and federal regulation is not needed in this area.

Response. EPA agrees that it is important to maintain the security and integrity of examinations and training sessions to protect the investment of resources into quality examination development and to ensure the competency of pesticide applicators. EPA acknowledges that many certifying authorities already have requirements that meet or exceed the examination administration and security provisions in the final rule.

While EPA agrees that the new requirements to ensure the security and effectiveness of examination and training administration will likely place additional burdens on some certifying authorities, EPA notes that other certifying authorities have already adopted similar requirements and have not considered the burden unreasonable. EPA acknowledges that some certifying authorities will have to alter their programs to comply with this final rule. These changes could result in candidates being left with fewer options for tests and continuing education courses; however, EPA expects that there will be few disruptions for those seeking certification or recertification. EPA believes the benefits of implementing the new requirements related to examination security justify

any increase in burden or reduction in options associated with these activities. EPA acknowledges that the improvements in examination security in the final rule will prohibit certifications based on take-home examinations or at-home workbooks that are not proctored. Certifying authorities retain other options for certification and recertification, such as training (in person or online) or examinations administered in accordance with the standards in this rule.

EPA disagrees with the comments that the security and examination administration requirements are too prescriptive and that federal guidance is not needed in this area. EPA believes the requirements codified in this rule represent a common-sense approach to consistent and reliable examination administration. Codifying a minimum set of requirements for examination administration and security is necessary in order for EPA—which makes registration decisions based on certain assumptions regarding the competence of certified applicators—to have confidence that certified applicators have an appropriate level of competency.

B. Closed-Book Examinations

1. *Existing rule and proposal.* The existing rule does not require closed-book examinations. In 2006, EPA issued guidance regarding examination administration that recommended that examinations be closed-book and proctored. EPA proposed including a requirement for examinations for initial certification and recertification to be closed-book.

2. *Final rule.* In response to comments, EPA did not include the term “closed-book” in the final rule. The final rule includes the proposed provision that no reference materials may be used during examinations, except those that are approved by the certifying authority and provided by the proctor. The final regulatory text is available at 40 CFR 171.103(a)(2)(ix).

3. Comments and Responses

Comments. A number of commenters, including some certifying authorities and university extension programs, opposed EPA’s proposal for closed-book examinations. Other certifying authorities sought clarification of the term “closed-book,” and opposed any prohibition on the use of reference materials. One commenter argued that the requirement to give closed-book examinations violates FIFRA’s provision that EPA “shall not require private applicators to take any examination to

establish competency in the use of pesticides.”

One commenter argued that EPA failed to consider the impacts on university extension programs and, in doing so, ignored the cost of revising manuals. The commenter noted their category manuals have been developed with the idea that they can write examination questions that address deeper knowledge because the examinations are open-book. One commenter argued that while the proposal to have closed-book examinations would increase compliance costs, EPA has not demonstrated the increased burden would yield greater protection of workers or the environment.

Some commenters noted that there would be significant impacts from a closed-book examination requirement on their private applicator certification examination program. One commenter stated that even if open-book examinations are allowed under the final rule, if proctors administering the private applicator examination must provide all the materials, there will be increased costs for purchasing and tracking the different private applicator category-training manuals that could be used for the examination. The commenter argued that candidates may have to wait until the certifying authority has provided the necessary reference materials to all testing locations. Another commenter recommended that the final rule allow certifying authorities who currently allow open-book examinations to convert to closed-book examinations at a rate of two examinations per year.

A number of commenters challenged EPA’s assertion that open-book examinations allow a lower standard for the process of determining and assuring competency. One commenter stated that the goal of the examination should be to test understanding of concepts and application of content, rather than memorization, which can be accomplished through closed-book examinations. One commenter stated that there is no proof closed-book examinations would result in more competent applicators than open-book examinations. Some commenters argued that examinations should reflect circumstances under which a person will actually operate, and that open-book examinations train applicators how to look up and use material that will be available. One commenter asserted a belief that it is inconsistent to consider the ability to look up information on labeling to be a required competency, yet the ability to look up information in a key reference material

to imply a lack of competency. One commenter noted that rather than gauging the test taker’s competency, closed-book examinations would discriminate against those who simply are not good test takers. Another commenter argued that applicators would cram for closed-book examinations, and that cramming does not lead to retention. Another commenter favoring open-book examinations cited a study that found no real differences in retention a week after administering either an open or closed-book examination (Ref. 41). One university extension program stated the belief that open-book examinations allow them to test applicators’ knowledge more thoroughly, in particular for category examinations which the commenter believes test more complex material than core examinations. The commenter argued that an applicator should know core material well enough to answer examination questions without needing to refer to the core manual.

Some commenters argued that examination security issues could better be addressed through other means, such as competent, active proctoring, multiple or unique versions of tests, and frequently modified tests, rather than through closed-book examinations or a prohibition on bringing outside materials to the examination. One commenter contended that manuals and all other materials could be provided to applicators at the examination site and turned in at the conclusion of testing to help in maintaining examination integrity. The commenter stated the belief that manuals are long enough that a person not already familiar with the materials would not have time to pass an examination, and thus the manual(s) can only serve as a resource as needed.

Some commenters suggest that EPA require a minimum score that candidates must meet in written examinations to obtain certification.

One commenter suggested that proctors be allowed to translate examination questions into a foreign language in order for the candidate to fully understand words used in the test that are not part of the label.

Response. In response to comments, EPA has not included the term “closed-book” in the examination administration requirements in the final rule. EPA is codifying examination administration standards that permit the use of reference materials (e.g., sample labeling, conversion tables, or manuals), as long as they are provided by the proctor or examination administrator and collected at the end of the examination. EPA acknowledges that

the term “closed-book” is sometimes interpreted to mean that no reference materials are allowed and that the candidate must rely solely on his or her memory. In response to comments, the final rule allows certifying authorities the flexibility to choose whether to provide candidates with reference materials during examinations. It also allows those certifying authorities that have designed their examinations for candidates equipped with reference materials to continue to use those, as long as the only reference materials used are those approved by the certifying authority, and are provided and collected by the proctor. EPA believes the requirements that reference materials be provided by the certifying authority and collected after the examination will reduce cheating by preventing candidates from entering the examination with prepared answers or copying examination questions into materials taken away from the examination.

EPA disagrees with commenter’s assertion that the requirements for examinations to be closed-book violates FIFRA. EPA acknowledges that FIFRA prohibits EPA from requiring private applicators to take an examination to establish competency in the use of pesticides under an EPA-administered certification program or from requiring certifying authorities to impose on private applicators an examination requirement as part of a certification plan. 7 U.S.C. 136i(a)(1). However, FIFRA allows States to regulate more strictly than EPA does in certain cases (FIFRA section 24(a); 7 U.S.C. 136y(a)), so certifying authorities may choose to require testing where EPA has not. And as FIFRA grants EPA the authority to prescribe standards for the certification of pesticide applicators, EPA may prescribe standards applicable to those certifying authorities that choose to certify applicators on the basis of examinations. The final rule does not require that private applicators take any examination, but it also does not prohibit certifying authorities from doing so. And recognizing that many certifying authorities do rely to some extent on examinations to establish the competence of private applicators, EPA is within its authority to specify that those examinations must meet certain minimum standards.

EPA estimated costs that the States and other certifying authorities incur for revising their certification plans, developing examination and training materials, administering (proctoring) examinations, and providing trainings for certification and recertification. EPA estimated the costs of developing new

exams and training materials (e.g., non-soil certification exams, and private core competency materials). For example, there will be new proctoring costs for administering aerial and non-soil certification examinations and costs for providing recertification trainings. Certifying agencies, and in some cases in cooperation with university extension programs, have to develop certification examinations and training materials for these new categories. However, EPA acknowledges that it did not estimate the cost of revising examinations to account for the requirement that examinations be closed-book. Since EPA is removing the term “closed-book” from the rule and clarifying that reference materials can be provided by the certifying authority, so long as no candidate is permitted to remove from the test site those materials he or she used during the examination, EPA believes the cost of revising examinations to meet this provision is a negligible portion of the cost of routine updates to examinations certifying authorities already undertake. However, examination facilities will need to be stocked with the reference materials. EPA also believes the examination security requirements reduce the burden on certifying authorities associated with updating compromised tests. Further, EPA believes that increasing examination security and preventing cheating will have a beneficial impact on applicator competency by ensuring that candidates have attained the knowledge required to pass an examination. In turn, EPA believes competent applicators are less likely to have mishaps that cause adverse effects on the environment or human health.

EPA acknowledges that the provisions of this final rule will have impacts on private applicator certification examination programs. EPA estimated the costs incurred by certifying authorities associated with examination and training material development and administration. See the Economic Analysis for this rulemaking (Ref. 1). Given the clarification in this final rule regarding the use of reference materials, EPA believes that most certifying authorities will require minor revisions to their manuals and/or tests. Hence, EPA expects disruptions to examinations, if any, to be minimal. EPA believes that, if necessary, certifying authorities can stock examination facilities with reference materials during the implementation period.

EPA has taken into consideration comments addressing EPA’s concern that open-book examinations allow a lower standard for the process of

determining and assuring competency. EPA agrees that the goal of certification examinations should be to ensure applicator competency (i.e., to test the understanding of concepts and application of content, rather than to test memorization). EPA also agrees that the ability to look up information in reference material does not imply a lack of competency. EPA notes that the authors of a recent review of studies comparing open-book and closed-book examinations conclude that the available data does not appear to favor using either open-book or closed-book examinations (Ref. 42). The authors note that while students may prepare more extensively for closed-book examinations, post-examination outcomes suggest little difference in testing effects. EPA did not find evidence to suggest that retention and competency are affected by such factors as whether the examination reflects the circumstances under which a person will operate, or that closed-book examinations discriminate against poor test takers. EPA agrees that the available evidence suggests that open-book examinations can be designed to test applicator knowledge without compromising competency standards. As a result, EPA is not distinguishing between core and category examinations with regard to the use of reference materials. EPA remains concerned about the possibility of cheating if candidates are allowed to bring outside materials into the examination or take examination materials home. In order to ensure the integrity of the examination process, EPA is retaining the proposed prohibition against candidates bringing in outside materials to the examinations. As discussed above, manuals and other reference materials may be provided by the certifying authority at the time of the examination for use during the examination, but must be collected at the end of the examination period.

In response to commenters who argued that examination security issues could be better addressed through means other than requiring closed-book examinations, EPA agrees. As discussed above, EPA is codifying the requirement that any reference materials used in the examination must be provided by the certifying authority at the examination and collected at the end of the examination. EPA is also establishing a requirement for test takers to provide a valid, government-issued photo identification or other form of similarly reliable identification to the certifying authority. EPA believes that these

measures will assist with assuring the integrity of the examination process.

EPA disagrees with commenters who requested that EPA establish a minimum score on examinations to obtain certification or recertification. Those who develop and administer examinations are in the best position to establish a minimum passing score based on the number, type and difficulty of questions. Even if two certifying agencies used exactly the same questions, differences in the types of reference materials the certifying agencies choose to provide or the time allotted could also influence the decision on where to set the minimum passing score for the examination. Because EPA is not requiring all certifying authorities to administer the same certification examinations or requiring standardization in what materials may be provided during the examination, it would not be appropriate for EPA to establish a minimum score for passing an examination.

Finally, in response to the comment that language translation tools be allowed, EPA is not prescribing what reference materials are allowable. EPA will generally defer to certifying authorities to determine what, if any, materials should be provided to candidates, and whether materials would serve as a resource for testing purposes or would compromise the utility of the examination in assessing competency of the candidate. Manuals, foreign language dictionaries or other language translation tools, labeling, and other materials may be provided to the candidate, as long as the materials are approved by the certifying authority for use during the examination and collected at the end of the examination period.

C. Proctor Requirements

1. Existing rule and proposal. The existing rule does not require examinations to be proctored or establish standards for proctors or certifying agencies administering exams. In 2006, EPA issued guidance regarding examination administration that recommended that examinations be closed-book and proctored.

EPA proposed to require that any examination for certification or recertification be proctored by an individual designated by the certifying authority and who is not seeking certification at any examination session that he or she is proctoring. In addition, EPA proposed that the proctor must do the all of the following:

- Verify the identity and age of persons taking the examination by

checking identification and having examinees sign an examination roster.

- Monitor examinees throughout the examination period.
- Instruct examinees in examination procedures before beginning the examination.
- Keep examinations secure before, during, and after the examination period.
- Allow only the examinees to access the examination, and allow such access only in the presence of the proctor.
- Ensure that examinees have no verbal or non-verbal communication with anyone other than the proctor during the examination period.
- Ensure that no portion of the examination or any associated reference materials is copied or retained by any person other than a person authorized by the certifying authority to copy or retain the examination.
- Ensure that examinees do not have access to reference materials other than those that are approved by the certifying authority and provided and collected by the proctor.
- Review reference materials provided to examinees after the examination is complete to ensure that no portion of the reference material has been removed or destroyed.
- Report to the certifying authority any examination administration inconsistencies or irregularities, including but not limited to cheating, use of unauthorized materials, and attempts to copy or retain the examination.
- Comply with any other requirements of the certifying authority related to examination administration.

2. Final rule. The final rule establishes requirements for examination administration and proctoring, but differs from the proposal in several ways. The final rule does not include the proposed requirement for the proctor to have examinees sign an examination roster. The final rule clarifies that the certifying authority, rather than the proctor, bears the responsibility for ensuring compliance with examination administration and security requirements. The certifying authority may assign specific elements of examination administration and security procedures to the proctor or to other individuals approved by the certifying authority, but the certifying authority remains responsible for compliance with its certification plan and the final rule. The final rule reorganized the requirements from the proposal and eliminated duplicative tasks. The final regulatory requirements are available at 40 CFR 171.103(a)(2).

The final rule adds flexibility for certifying authorities by allowing them to adopt standards that meet or exceed the standards at 40 CFR 171.103(a)(2). The final regulatory requirements for States to adopt standards that meet or exceed the standards at 40 CFR 171.103(a)(2) are located at 40 CFR 171.303(a)(5) and 171.303(b)(2)(ii)(C).

3. Comments and Responses

Comments. One commenter stated the belief that competent proctoring would reduce the likelihood of questions being copied and shared with subsequent test takers.

Some commenters contended that proctoring requirements should not be in the regulations, as certifying authorities have been administering and securing examinations for years. One commenter suggested that the proctor instructions should be included as part of certification plans rather than being placed in the regulations. One certifying authority indicated that their examinations are already proctored; other commenters noted that the proposal would codify existing policy that all examinations be proctored.

One commenter argued that requiring proctoring of examinations and specific proctoring requirements will place a strain on growers. Another commenter asked whether and for how long the examination roster must be kept.

Response. EPA agrees that examination administration and security are important elements of the certification process. EPA also agrees that requiring examinations to be proctored and establishing minimum examination security requirements will reduce likelihood of cheating during the examinations, including questions being copied and shared with subsequent test takers.

EPA acknowledges that certifying authorities have developed expertise in administering examinations for pesticide applicator certification and recertification. EPA is codifying certain examination security requirements rather than leaving them wholly to the certifying authorities because EPA believes that placing the requirements in the federal regulations will help assure a level of examination security and integrity that is consistent across certifying authorities and appropriate for ensuring applicator competency. In 2006, EPA issued non-binding guidance regarding examination administration that recommended that examinations be closed-book and proctored. EPA notes that while many certifying authorities currently require exams to be proctored, some certifying authorities have no proctoring requirements. The final rule

requires certifying authorities to address exam administration and security in their certification plans and allows certifying authorities to establish different exam administration security standards that meet or exceed EPA's standards.

EPA does not believe that requiring proctored examinations will place a strain on producers. The commenter did not specify what strains producers would be placed under by the requirement that examinations be proctored, but EPA believes that its Economic Analysis has accounted for all reasonably foreseeable impacts of the final rule.

In the final rule, EPA is not requiring certifying authorities to create or keep an examination roster as a record. Therefore, based on comments received, EPA removed the proposed requirement for the proctor to ensure candidates sign a roster. Nevertheless, EPA believes it would be prudent for certifying authorities to maintain a record of individuals present at an examination to track applicators' progress towards certification or recertification, and in case the presence of an individual at an examination is called into question. See Unit IX.D.

D. Verification of Identity

1. *Existing rule and proposal.* The existing rule does not have a requirement for verification of the identity of persons seeking certification or recertification. EPA proposed to add a requirement for those seeking certification or recertification to present a government-issued photo identification at the time of the examination or training session. EPA requested comment on whether it should consider allowing exceptions to the requirement for candidates to present identification, and if so, under what circumstances. EPA also sought examples of how such exceptions could be implemented.

2. *Final rule.* The final rule requires both private and commercial applicators seeking certification or recertification by examination to present identification at the time they take the examination. In addition, certifying authorities must also verify the identity of private applicators seeking initial certification through training. The final rule requires that the candidates present a government-issued photo identification or other comparably reliable form of identification authorized by the certifying agency; certifying agencies have discretion to determine what forms of identification are appropriate for their jurisdiction.

In the final rule, EPA has revised the proposed requirement for verifying the identity of participants for recertification. Under the final rule, certifying authorities must specify their identification requirements and procedures for verifying the identities of those seeking certification or recertification in their certification plans. The final rule does not require private or commercial applicators attending continuing education or training sessions for recertification to present a government-issued photo identification or comparably reliable identification authorized by the certifying authority. Instead, the final rule requires certifying authorities to ensure that any continuing education course or event relied upon for recertification include a process to verify applicators' successful completion of the program. This performance standard includes verifying the applicator's identity in some way as well as verifying their successful completion of the program.

3. Comments and Responses

Comments. Many commenters agreed with EPA's proposal to require positive verification of an individual's identity with a government-issued photo-identification at the time of examination. Some commenters agreed with EPA's proposal to require verification of an individual's identity at the time of examination, provided certifying authorities are given the flexibility to determine what is considered acceptable documentation. Of those States requesting that EPA include some measure of flexibility in the requirement for identification, a few cited the need to be able to accommodate religious or other groups that do not allow the use of government-issued photo identification. One commenter suggested that EPA revise the term "government-issued" to "photographic" or "verifiable" as a way of offering States and applicators more options. One commenter suggested that some citizens might not have a government-issued ID. As an alternative, the commenter suggested EPA could require States to have a procedure as part of their certification plans to accommodate candidates and applicators lacking a government-issued photo identification, but not specify in the federal rule what it is. Another commenter proposed that EPA clearly specify that positive identification for purposes of registration for training and testing, and granting of certifications may include any document or combination of documents that satisfy proper completion of the U.S.

Citizenship and Immigration Services (USCIS) employment eligibility verification documentation, or the USCIS Form I-9.

Some commenters expressed the concern that the requirement for positive verification of identity would be overly burdensome and unnecessary for recertification training sessions. Some of these commenters anticipated potential issues and additional costs for sponsors of large courses, conferences, or workshops with large numbers of individuals in attendance. They argued that certifying authorities and providers of these services do not have the staff or ability to sign off and check each applicator's government-issued identification after every session. Another commenter asserted that to do so would be cost prohibitive and there would be no additional benefits from adding this step to current recertification processes. One certifying authority that relies on workshop providers noted that they did not have the legal authority to enforce a requirement to check identification of participants for each workshop session. Another commenter contended that a requirement to present government-issued identification for all participants may inhibit or intimidate certain individuals from attending valuable training sessions. The commenter stated that farmworkers and others should be encouraged, not discouraged from seeking training.

Some commenters suggested that successful candidates for a commercial applicator license could be issued a license that includes their photograph, similar to a driver's license, which could be used to verify attendance at recertification courses. One certifying authority that issues a certification card after examination without a photo indicated that they felt that card was sufficient and did not want to add a photo to the card.

One commenter proposed the following two-pronged approach to replace the proposed requirement for applicators to present a government-issued photo identification at every program that offers continuing education credits: (1) Allow all of the verification procedures described in the two CTAG papers, ("Pesticide Applicator Recertification: Verifying Attendance at Training Events" and "Pesticide Applicator Recertification: Online Training—Course Design and Structure", which are available at <http://www.ctaginfo.org>) including sampling and auditing (Refs. 43 and 44); and (2) encourage certifying authorities to find a way to move toward the ideal goal of checking every applicator's photo

identification by limiting the proportion of recertification credits that could be earned at events at which every person's photo identification is not checked.

Response. EPA believes that requiring positive identification of candidates seeking certification and recertification by examination is critical element of maintaining the integrity of the pesticide applicator certification and recertification programs that rely on examinations, evidenced by the number of States that have adopted a requirement to verify the identity of candidates taking examinations. This requirement would help to ensure that the person who takes the examination is the same person who receives the certification, and help prevent fraud and abuse. It also allows certifying authorities the ability to verify that candidates for certification meet the minimum age requirements for certification.

Based on comments, EPA agrees that certifying authorities need flexibility to determine what documentation is acceptable to positively identify candidates taking examinations in order to accommodate candidates who do not have government-issued photo identification, for religious or other reasons. Under the final rule, certifying authorities must require examination candidates to present a government issued photo-identification or other comparably reliable form of identification. While EPA encourages certifying authorities to require a government-issued photo identification for verification purposes, the final rule allows certifying authorities the ability to determine what constitutes acceptable documentation for their jurisdiction. EPA also agrees with the suggestion that EPA require certifying authorities to have a procedure as part of their certification plans to accommodate candidates and applicators lacking a government-issued photo identification. Hence, in the final rule, EPA is requiring certifying authorities to specify their identification verification requirements in their certification plans. EPA disagrees with the request that EPA specify that any document(s) that satisfy USCIS Form I-9 be acceptable as positive identification for purposes of certification. As discussed above, EPA is allowing certifying authorities the ability to determine what documentation is acceptable.

For recertification training sessions, EPA acknowledges that it did not fully consider the potential burden on certifying authorities to require positive identification of candidates, especially at large conferences or workshops with

multiple sessions. Based on comments, EPA agrees that the requirement for checking photo identifications could be burdensome and difficult to implement at conferences or workshops with large numbers of individuals in attendance. Furthermore, EPA recognizes that some States have implemented other methods to verify applicators' attendance at recertification training courses or events, such as scanning the barcode on the applicator's license at the beginning and end of the session. While the final rule does not require certifying authorities to identify the applicators attending training sessions, either on-line or in person, by checking a government-issued photo identification, EPA is requiring that certifying authorities ensure that any continuing education course or event includes a process to verify the applicator's successful completion of the course or event. To meet this requirement, there must be a way to identify the candidate for recertification as well as to verify that the candidate completes the program. EPA believes that retaining this requirement, while relaxing the requirement for presenting a government-issued photo identification, will maintain the integrity of the recertification process.

In response to the commenter who stated that some certifying authorities that rely on workshop providers have no legal authority to enforce a requirement on workshop providers to check identification of candidates at recertification trainings, EPA notes that under the final rule they would not be required to do so. Under the final rule, the certifying authority must have some process for verifying the applicators' successful completion of the recertification course or event, which involves some method of verifying the applicators' identity. The final requirements do not preclude certifying authorities from requiring applicators to provide photo identification at private or commercial applicator recertification training sessions. In addition, certifying authorities must specify in their plans how they will ensure that courses or events relied upon for recertification include a process to verify that a certified applicator has actually completed the training required for recertification.

EPA is retaining the requirement that private applicators present proof of identity to the certifying authority at the time of training programs for initial certification. This requirement would help to ensure that the person who takes the examination is the same person who receives the certification, and meets the minimum age and ensures the identity

of the person receiving the certification. As with examinations, EPA is allowing certifying authorities the flexibility to determine what documentation is acceptable.

While EPA agrees with the commenter that farmworkers and others involved in the use of RUPs should be encouraged to seek training in their proper use, EPA believes that it is unlikely that farmworkers would attend recertification courses for private and commercial applicators. EPA has no objection at all to farmworkers or other persons taking training for their own purposes without identifying themselves. But if an applicator wants a particular training event to be part of the basis for his or her certification or recertification, the applicator must prove that he or she was in fact the person who successfully completed the training.

EPA disagrees with the request that certifying authorities be required to issue to successful candidates a license or other documentation, which includes their photograph and which could be used to verify attendance at recertification courses. EPA agrees with a certifying authority who commented that requiring certifying authorities to issue a card with a photo could be burdensome. The final rule does require certifying authorities to issue appropriate credentials or documents verifying certification of successful candidates. In the final rule, EPA is providing certifying authorities the discretion to determine what must appear on the credentialing documentation. EPA is concerned that if the Agency were to require a photograph on the credentialing documentation, it might be considered an official, government-issued photo identification for identification purposes beyond the scope of its original intent. EPA is not prepared at this time to issue appropriate standards or regulations to ensure pesticide applicator credentials are not able to be used for other purposes. In addition, as discussed above, such a requirement with a photograph would still need exceptions for individuals with religious affiliations that prohibit their photograph from being taken. The final rule does not preclude certifying authorities from issuing such license with a photo.

EPA is not codifying the two-pronged approach proposed by one commenter and described above. EPA agrees with the commenter that the ideal goal is to check every applicator's identification at recertification trainings. Based on comments received, however, EPA is not requiring applicators to present

identification at recertification trainings. As discussed elsewhere, EPA is retaining the requirement that any education course or event offered to satisfy recertification training requirements must have a process to verify the applicator's successful completion of the course or event. The verification procedures described in the two CTAG papers, ("Pesticide Applicator Recertification: Verifying Attendance at Training Events" and "Pesticide Applicator Recertification: Online Training—Course Design and Structure") are examples of the types of procedures that would be acceptable to include in certification plans (Refs. 43 and 44).

E. Online Training and Certification Standards

1. Comments and Responses

Comments. Some commenters expressed a belief that EPA should identify language that allows for future avenues of initial certification and recertification training that incorporate electronic identification methods not currently widely used by States. Another commenter argued that computer-based examinations are the norm in both academia and many high-stakes industries and requested assurance that "in writing" (§ 171.103(a)(2)(i)) includes electronic media and is not limited to paper copies for examinations. One commenter requested that the rule allow expressly for online training and certification programs that are consistent with applicable on-line education standards.

One commenter asked how online recertification courses will be impacted by the requirement to verify the identity of certified applicators attending recertification training sessions. One certifying authority argued that online tests cannot meet the standards specified in § 171.103(a)(2) and that standards to that level are not called for in the case of private applicators. In particular, the commenter was opposed to requiring States who choose to test private applicators to only offer proctored examinations. The commenter stated the belief that if the requirement goes through as proposed, States will have to consider alternatives including a training-only option for certification and not require an examination at all. Another commenter expressed concern that requiring applicator candidates to present photo identification at the time of examination or training might preclude the use of online programs. The commenter contended that online training and certification is a valuable tool for pesticide education programs

for applicators; it allows applicators to receive quality training without incurring the economic costs of traveling to a physical site, including time away from their business and expenses such as meals, transportation, and hotel accommodations. Another commenter suggested that an affidavit signed by the candidate certifying their participation could be used in place of presenting identification for online training to verify the identity of the candidate.

Another commenter asked about the sign-in log the EPA proposed to have proctors keep at all testing locations. The commenter assumes that their computer based testing system will be sufficient as a sign-in log. The system keeps an accurate activity log and all pertinent information on every individual. Coupled with verification by a government issued ID, it appears unnecessary to require a sign in log as well. The commenter had two questions for EPA should a signature log be required: (1) What is the record retention period for the signature log? (2) Does it coincide with the established 2-year record retention for application or the valid term of the applicator's license?

Response. EPA acknowledges that some certifying authorities administer computer-based certification and recertification examinations, and that the use of online and distance-based programs is likely to expand. In this final rule EPA, however, is not expressly codifying language or standards that incorporate electronic identification methods for training sessions or examinations. The final rule does not prohibit the use of online training programs or electronic verification procedures; however, EPA is not prepared at this time to establish by regulation specific standards for online training and education or electronic verification. EPA confirms that the term "in writing" as used in the final rule is intended to encompass both paper-based and computer-based formats. Certifying authorities that are using or intend to use electronic verification will need to explain in their proposed plans how their methods satisfy the requirements of the final rule. As EPA gains more experience with how certifying authorities are using electronic verifications methods, EPA may consider providing guidance or explicitly codifying standards for electronic verification at some future date.

EPA agrees that online training and exams are a valuable tool for pesticide education programs for applicators. EPA expects that there will be minimal

impact on online or distance learning continuing education programs as a result of this final rule. EPA disagrees with the comment that the examination standards specified in the proposed rule cannot be met through on-line testing. EPA agrees that some on-line testing procedures may not meet the standards in the final rule. For example, some remote on-line testing may not meet the identification verification and proctoring standards in the final rule. However, EPA believes remote, on-line testing can be done in a way the does meet the standards. For example, testing centers that provide proctoring services for a fee are available today in many locations; other alternatives may be available in the future.

EPA believes that the same examination procedures should apply to testing for both private and commercial certifications. EPA does not require examinations for private applicators, and EPA recognizes that some certifying authorities may decide to provide only training options for private applicators. But where a certifying authority intends to certify or recertify private applicators through examination, the examinations must meet the requirements of the final rule. As discussed above, EPA is not prohibiting on-line or remote testing that meets the standards in the final rule. If a certifying authority chooses that option, however, their certification plan should specify how it meets the examinations security and administration procedures in the final rule.

As discussed in the response above, EPA is not requiring applicators taking recertification trainings to present a government-issued photo identification, whether the training is offered in person or online. However, certifying authorities must positively identify both private and commercial applicator candidates taking an examination for initial certification or recertification, as well as those candidates seeking private applicator certification through training. This requirement is necessary to maintain the integrity of the examination process, and to ensure applicators meet the minimum age requirements for initial certification. The identity verification requirements apply to both in person and online examinations, for both initial certification and recertification, as well as to trainings for initial certification. Recertification training courses or events must include verification of each applicator's successful completion of the course or event, which includes some verification of the applicator's identity.

EPA disagrees that requiring candidates to present identification at the time of examination for recertification would preclude the use of online programs for examination. EPA acknowledges that this requirement would preclude remote, online examinations that are not proctored or do not verify proof of identity. As discussed above, however, proctoring services may be available that would permit remote testing. EPA also acknowledges that some training programs for initial certification for private applicators would potentially be impacted. Certifying authorities who allow private applicators to certify initially through training would be required to positively identify the candidates in order to ensure that the candidate himself/herself successfully completed the training, and that minimum age requirements are met.

For recertification training sessions, EPA is not requiring proof of identity to be presented by attendees under the final rule. EPA is, however, retaining the requirement that any continuing program or event, whether online or distance learning, must have a process to verify the applicator's successful completion of the educational objectives of the program, which includes verifying each participant's identity. EPA is not codifying the method by which certifying authorities require that recertification courses or events verify applicators' successful completion of the program. There are a number of ways to verify the applicator's identity as well as whether the applicator completed the program. EPA acknowledges that an affidavit signed by the candidate certifying their participation, as suggested by a commenter, could be a component of such a process.

EPA agrees with the commenter who suggested that a computer-based system would be sufficient as a sign-in log, when coupled with verification of identity. Although EPA is not finalizing a requirement for certifying authorities to maintain sign-in logs, EPA notes that keeping such a log would be a prudent way to verify the presence of a candidate at an examination in the event that other records indicating that the candidate has completed testing are lost, or that the presence of the candidate is disputed. Further, EPA would consider a sign-in log for recertification training sessions as a component of the process of verifying that an applicator has completed the training objectives.

X. Strengthen Standards for Noncertified Applicators Working Under the Direct Supervision of Certified Applicators

A. Qualifications of Noncertified Applicators Working Under the Direct Supervision of a Certified Applicator

1. Existing rule and proposal. FIFRA requires that a noncertified applicator using an RUP under the direct supervision of a certified applicator (hereinafter "noncertified applicator") be competent. 7 U.S.C. 136(e)(4). The existing rule requires the certified applicator, if not present during an application, to provide verifiable instructions to the noncertified applicator including detailed guidance on proper applications.

EPA proposed to require that noncertified applicators receive pesticide safety training covering the content outlined in the proposal, and that training be completed annually. EPA proposed two alternatives ways to satisfy this training requirement. Noncertified applicators could become qualified by either satisfying the training requirement for handlers under the WPS annually, or passing the exam on core standards of competency for certified commercial applicators every 3 years. EPA also proposed a requirement that the training be presented orally from written materials or audio-visually in a manner understood by the noncertified applicator, such as through a translator, and that the trainer be present during the entire training program and respond to noncertified applicators' questions.

2. Final rule. The final rule includes four options for noncertified applicators to become qualified to use RUPs under the supervision of a certified applicator. Two of the options are the training options from the proposed rule, with edits to the training content listed in 40 CFR 171.201(d) to parallel the final handler training requirements under the WPS. For the training options, the final rule requires that noncertified applicators receive training covering the content outlined in the rule or satisfy the training requirements for handlers under the WPS. Either method of qualification must be completed within the 12 months preceding the use of an RUP under the direct supervision of a certified applicator and must be completed annually. A third option is that the noncertified applicator has met the qualification requirements established by a certifying authority that meet or exceed the annual training specified in this rule. The final option is that the noncertified applicator is currently a certified applicator but is not

certified to perform the type of application being conducted, such as if a commercial applicator certified in ornamental and turf is a noncertified applicator working under the supervision of a certified applicator for a rights-of-way application, or is only certified in another jurisdiction. The final regulatory text for this requirement is located at 40 CFR 171.201(c) and (d).

Certifying authorities will have the option to adopt additional or different requirements for noncertified applicator qualifications, as long as they meet or exceed the requirements in the rule. The final rule specifically lists this option at 40 CFR 171.201(c)(3).

The content of the training in the final rule is similar to what EPA proposed, with minor edits to ensure consistency with the final handler training requirements under the WPS. As proposed, in the final rule training must be presented either orally from written materials or audiovisually in a manner understood by the noncertified applicator, such as through a translator if necessary, and the trainer must be present during the entire training program and must respond to noncertified applicators' questions. The final regulatory text for these requirements is located at 40 CFR 171.201(d).

3. Comments and Responses

General Comments. Some certifying authorities and advocacy organizations generally supported training (with an exam option) for noncertified applicators of RUPs, and noted that some certifying authorities already require training of noncertified applicators of RUPs. Two certifying authorities said that training would be beneficial for new employees and for those who cannot pass a certification exam but could use RUPs as noncertified applicators given adequate training and supervision. One grower organization said allowing noncertified applicators to satisfy the training requirement by taking WPS handler training would reduce the burden on agricultural employers. Certifying authorities requested that EPA develop and approve training materials and allow certifying authorities the flexibility to continue their own programs. One State and some advocacy organizations favored requirements that training must be presented orally from written materials or audiovisually and in a manner the trainee can understand, and that the trainer must be present during the entire training and respond to questions.

Some commenters suggested other approaches. One pesticide applicator,

an advocacy organization and an applicator organization recommended requiring a combination of training and hands-on experience. The applicator organization emphasized the need to allow an option for computer-based training, and noted that computer-based training is permitted for training required by the Occupational Safety and Health Administration.

Some certifying authorities and advocacy organizations emphatically opposed any use of RUPs without full applicator certification because of the potential impacts on people and the environment. In one State, noncertified agricultural handlers are prohibited from using RUPs. One State asserted that establishing a program allowing noncertified applicators to use RUPs contradicts EPA's intention to strengthen federal certification standards with the revised rule. Another certifying authority interpreted the proposal as indicating a conclusion by EPA that the "under the supervision" provision does not work.

Three applicator associations, some grower organizations, two university extension programs, a county government, a business organization and a few State farm bureaus were generally opposed to a training requirement for noncertified applicators. They were concerned that the employee turnover rate, already high for noncertified applicators, would substantially increase. They also questioned the need for the proposed training program when noncertified applicators mostly use non-RUPs. These commenters favored State-by-State requirements in lieu of a national requirement. According to one grower organization, many people could be involved in applications on one establishment, thereby requiring the need to train many noncertified applicators. One grower organization concluded that even if a federal standard were established, certifying authorities would always exercise their right to tailor their programs based on pesticide use and the needs.

Many certifying authorities and a State farm bureau asserted that EPA is establishing an unwarranted, *de facto* certification program, and a new certification classification. They argued that noncertified applicators might as well become certified applicators if they have to take an exam and/or training. One certifying authority suggested EPA add an enforceable alternative to the proposed alternatives, allow on-site (or "line-of-sight", "within-sight") supervision, which would resolve any certifying authority's need for a "non-reader" provision while sparing

inexperienced persons from a scripted training program for which they have no context. One certifying authority suggested that from its point of view, EPA's proposal ignored the certifying authority's long established multi-layer and varied classification system of applicators (*i.e.*, apprentices, technicians, journeymen) and would impose requirements on persons who may only occasionally handle pesticides.

A recurring theme of many comments by certifying authorities and university extension programs was a desire for certifying authorities to be able to continue their existing programs, especially if the program meets the same objectives as EPA's. They suggested that the proposed changes would cause confusion and perhaps conflict with the existing regulations of certifying authorities. Many certifying authorities felt strongly that they should be allowed to continue programs already established before EPA's proposal. For example, some commenters noted that their certifying authorities already have in place a noncertified applicator qualification option similar to the proposed option to qualify by passing the commercial core exam. Other commenters opposed the proposed option to qualify as a noncertified applicator by passing the core exam for commercial applicators because in their jurisdiction, passing the commercial core exam confers certification as a private applicator. Another commenter opposed the proposed option to qualify as a noncertified applicator by passing the commercial core exam because it would burden the State's exam centers, which are already operating beyond their intended capacity. The commenter requested that EPA eliminate this option and allow qualification only through training under the certification rule or training as a handler under the WPS. One commenter requested that if an option to qualify by passing the commercial core exam is included in the final rule, the requalification interval and requirements should be linked to the certifying authority's applicator recertification program, rather than requiring requalification by retesting within 3 years, completing training under the certification rule, or training as handler under the WPS. Some advocacy organizations opposed allowing certifying authorities to have different requirements, resulting in migrant workers using RUPs as noncertified applicators having to take multiple trainings throughout a year. One certifying authority was uncertain whether the proposal would require

noncertified applicator training with each new employer. Another commenter questioned whether medical doctors and veterinarians would be exempt from the requirements for direct supervision of noncertified applicators by certified applicators.

Responses. EPA acknowledges commenters' point that the most protective and safest approach would be to require all users of RUPs to become certified applicators, and recognizes that some certifying authorities do prohibit RUP use by anyone other than a certified applicator. However, FIFRA permits RUP use by noncertified applicators under the direct supervision of a certified applicator who may not be physically present, and EPA may not prohibit the use of RUPs by noncertified applicators except through product-specific labeling decisions. EPA seeks to reduce the risks associated with use of RUPs by noncertified applicators by adding requirements for noncertified RUP applicators to be qualified, either through training, being a certified applicator in a different category or jurisdiction, or meeting requirements established by the certifying authority that meet or exceed EPA's requirements. The options for qualifying as a noncertified applicator are flexible and significantly less burdensome than the requirements for becoming a certified applicator. Further, the options to qualify by training are tailored to the responsibilities of noncertified applicators applying RUPs under the supervision of a certified applicator who may not be physically present.

Noncertified applicators of RUPs in nonagricultural settings are just as likely to experience illness and injury from pesticide exposure, and cause harm to others and the environment, as agricultural handlers of RUPs. However, agricultural handlers are required to receive pesticide safety training under the WPS, while nonagricultural handlers currently are not. And in both agricultural and nonagricultural contexts, noncertified applicators are often using RUPs with considerable independence, far from the supervising certified applicator. FIFRA requires noncertified applicators to be "competent" and acting under the direct supervision of a certified applicator who is available if and when needed, but neither FIFRA nor EPA's existing regulations specify competency standards for noncertified applicators of RUPs. Because RUPs generally present a greater risk to health or the environment than other pesticides, noncertified applicators need to be more competent in regard to pesticide use than the average person. In order that EPA's

registration decisions regarding RUPs can presume a nationwide minimum standard of competency among noncertified applicators, it is reasonable to establish competency standards for noncertified applicators by requiring pesticide safety training similar to what is required for agricultural handlers under the WPS.

EPA agrees with the comment that a combination of training and hands-on experience would be ideal, but recognizes that setting criteria for hands-on experience would be a complicated proposition given the various types of application categories and uses involved. At a minimum, the requirement would have to be tailored to each application category. Given the many possible RUP use scenarios, EPA has chosen not to require a hands-on experience requirement in the final rule. However, EPA recognizes that some certifying authorities currently require noncertified applicators to have hands-on experience, and may continue to do so under the final rule.

Many commenters opposed a required training program for noncertified applicators because most of the time they use non-RUPs. EPA notes that the federal training requirements will only apply to those noncertified applicators using RUPs. The training required for noncertified applicators under the final rule is important whether they use an RUP once a year or every day. Certifying authorities that currently do not distinguish between RUP and non-RUP noncertified applicators may reconsider whether such a distinction is more appropriate in the context of this final rule. A company with many noncertified applicators whose business involves applying a few RUPs and many non-RUPs might control costs by training a small number of the noncertified applicators as users of RUPs.

In response to the request by commenters to be able to maintain existing programs, EPA specifically added a provision to the noncertified applicator qualification requirements to accommodate other approaches and will consider approval of such programs in lieu of the federal requirement during the certification plan approval process. EPA acknowledges that an option to qualify as a noncertified applicator by passing the commercial core exam, along with an appropriate method to ensure requalification, would meet or exceed the standards for noncertified applicator qualification in the final rule. However, in response to comments regarding certifying authorities' need to maintain flexibility to choose which non-training qualifications for

noncertified applicator are appropriate in their jurisdiction (subject to approval by EPA under the certification plan), in the final rule EPA is not requiring certifying authorities to accept passing the commercial core exam as sufficient qualification to use RUPs under the supervision of a certified applicator; EPA leaves the decision of whether or not to allow this and other methods of qualification to the discretion of each certifying authority.

Because EPA added a requirement to the final rule for the supervising applicator to be certified in an appropriate category relative to the RUP use, EPA also added a corresponding method for qualification as a noncertified applicator to the final rule. Absent this addition, a person who holds a valid certification would not be considered a certified applicator for RUP uses outside the category(ies) in which the applicator is certified. For example, a person could hold a valid certification in the turf and ornamental category, but for the purposes of conducting a fumigation of turf, the person would be considered a noncertified applicator because he or she does not hold a valid certification to perform soil fumigation. Such a person has clearly demonstrated competency to use certain RUPs by obtaining a certification. EPA acknowledges that obtaining a certification in any category exceeds the standards for noncertified applicator qualification. Therefore, EPA added an option to the final rule to allow certified applicators who are not certified in the category of the RUP use to operate under the supervision of an applicator holding a valid certification to conduct and supervise the use of the RUP without additional training or qualification requirements.

Regarding the burden of providing training, EPA will support the development of training materials. EPA will review computer-based and online training programs, such as those allowed by Occupational Safety and Health Administration (OSHA) (e.g., 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response) and other entities, and will consider issuing guidelines on computer-based and online programs.

If training is used to qualify noncertified applicators, subsequent supervising certified applicators do not have to provide noncertified applicators under their direct supervision training provided they can verify the existence of and have access to documentation establishing that the noncertified applicator has completed training within the previous 12 months. Noncertified applicators who work in

more than one jurisdiction must comply with the requirements of each certifying authority as specified in its EPA-approved certification plan. EPA has clarified the final rule to state that medical doctors and veterinarians, who are exempt from the standards for certification of commercial applicators under both the existing and final rules, are also exempted from the requirements for direct supervision of noncertified applicators by certified applicators.

Comments on Requalification Interval. While there is general agreement that there should be an interval or cycle for requalification for noncertified applicators (e.g., retaking training), commenters favored intervals ranging from one to five years. One certifying authority organization requested that EPA establish the same retraining or requalification interval for noncertified and certified applicators to minimize confusion. Several advocacy organizations and one Tribal organization favored a one-year retraining interval because more frequent repetition increases retention and is consistent with the WPS handler training interval. One State expressed support for establishing a three-year interval to be consistent with the proposed recertification interval for certified applicators. Two commenters asserted that a five-year interval would be reasonable given that noncertified applicators receive continuous hands-on experience. A few certifying authorities requested that they establish their own requalification period up to a maximum that is no longer than the period established by EPA. One applicator association requested that the noncertified applicator training interval be identical to the certified applicator recertification interval.

Responses. EPA agrees with commenters favoring a one-year interval for retraining noncertified applicators. As expressed by several advocacy organizations, repetition increases retention. EPA notes that the annual training requirement is consistent with the interval for WPS handler training. EPA recognizes that a person may be both a noncertified applicator and a WPS handler, so allowing the WPS handler training to qualify a noncertified applicator prevents duplication and burden on the noncertified applicator, trainers, and supervisors. Also, an annual interval could be easier to track and remember than longer intervals. Given the potential for harmful effects to humans and the environment, it is reasonable to provide noncertified applicators using RUPs with pesticide safety training at

least every 12 months. The training content for noncertified applicators covers a limited number of key pesticide safety points and is less substantial than the continuing education required for recertification by certifying authorities, so a shorter interval for noncertified applicators is reasonable. During the certification plan approval process, EPA may consider different requalification intervals for noncertified applicators if the certifying authority proposes another method of qualification that meets or exceeds EPA's standards in the final rule as permitted under 40 CFR 171.201(c)(3).

Comments on Training Content. One advocacy organization supported the proposal to require that training include information on how to report a suspected illness to a State agency. In response to EPA's question about whether a point on protecting pollinators should be added to the noncertified applicator training program, certifying authorities and a grower organization expressed general opposition. Commenters argued that it was not relevant to all applicator categories and would already be incorporated where applicable.

Responses. The final rule revises the proposed requirement for training to include information on how to report a suspected illness related to pesticide exposure to the regulatory agency. This change was made to be consistent with the final WPS handler training content. EPA has chosen not to add a point to the noncertified applicator training on pollinator protection, for the same reasons it was not included in the competencies for private or commercial applicators. See the discussion in Unit VI. for more details. However, the final rule requires training on environmental concerns "such as drift, runoff, and wildlife hazards" which would reasonably be expected to include pollinators in situations where that is appropriate. EPA expects that at minimum, noncertified applicators will get information on protecting pollinators where relevant and on a case-by-case basis when the labeling includes pollinator protection language.

Comments on Burden. Certifying authorities expressed concern that a training requirement for RUP noncertified applicators places a burden on pesticide safety education programs, certifying authorities, and exam centers that are already strained, and that EPA simply should require all applicators using RUPs to be certified. One certifying authority requested that EPA not require an exam option because applicator candidates in their jurisdiction already face a two-month

wait to take an exam. One certifying authority noted that if supervisory requirements were adequate, there would be no need for a training program. Another certifying authority asserted that instead of creating more work for States, trainers, certified applicators, and noncertified applicators by establishing a training program, EPA should simply require all applicators using RUPs to be certified.

Responses. EPA maintains that training or some other method of ensuring that noncertified applicators have a basic understanding of pesticide safety is important for noncertified applicators to ensure that they are able to use RUPs without causing unreasonable adverse effects to themselves, other persons, or the environment. If EPA were to tighten supervisory requirements (e.g., limitations on proximity, number of persons supervised, types of activities) enough to eliminate the need for training noncertified applicators, it would be significantly more disruptive and burdensome than the training requirements of the final rule. Moreover, even if supervisory requirements were substantially strengthened, there would still be benefits in noncertified applicators understanding the potential hazards associated with using RUPs.

The final rule allows certifying authorities to adopt different requirements for noncertified applicator qualifications that meet or exceed the requirements in the final rule. This may include approaches such as prohibiting the use of RUPs by noncertified applicators or requiring noncertified applicators to pass a written exam.

B. Establish Qualifications for Training Providers

1. Existing rule and proposal. The existing rule does not require that noncertified applicators be trained, and therefore, does not specify qualifications of trainers of noncertified applicators.

EPA proposed to require that providers of noncertified applicator training be qualified by being a certified applicator, a trainer of certified applicators or handlers designated by the certifying authority, or a person who has completed a WPS train-the-trainer course for training handlers.

2. Final rule. The final rule adopts the proposed requirement with minor edits. Under the final rule, the person conducting noncertified applicator training as specified in 171.201(d) must be a certified applicator, a trainer of certified applicators or handlers designated by the certifying authority, or a person who has completed a WPS train-the-trainer course for training

handlers. The final regulatory text for this requirement is located at 40 CFR 171.201(d)(2).

3. Comments and Responses

Comments. In general, most certifying authorities expressed appreciation that a certified applicator could be a trainer of noncertified applicators. These commenters were concerned that without this qualifying option there would be a shortage of noncertified applicator trainers. Several applicator organizations suggested that EPA create a national train-the-trainer program for trainers of structural applicators.

Several certifying authorities, an association of certifying authorities, and a grower organization opposed EPA's proposal on noncertified applicator trainer requirements. These commenters asserted that the proposal was a WPS-like training program with little value added. Certifying authorities were generally concerned with adding burden to their programs. One certifying authority requested that EPA allow them to set their own requirements for noncertified applicator trainers. One organization of certifying authorities opposed WPS trainers giving training to nonagricultural noncertified applicators. One grower organization opposed any requirement, but agreed that if EPA adopted the proposed requirement, trainers designated by certifying authorities and WPS trainers were qualified to train noncertified RUP applicators.

Response. The final rule retains the proposal's three options for persons to qualify as a trainer of noncertified applicators to ensure an adequate number of trainers would be available while seeking to ensure that those conducting training are adequately qualified to do so. The options for noncertified applicator trainer qualifications should make it easier for supervisors and noncertified applicators to find qualified trainers so that they can comply with the training requirement. In many cases, the certified applicator supervisor may be tasked with providing training. Allowing certified applicators and WPS trainers to become trainers of noncertified applicators lifts the potential burden on certifying authorities to designate trainers. WPS trainers are qualified to provide WPS-required training to agricultural handlers, and have the background that should enable them also to effectively present the noncertified applicator training content required under this final rule to train noncertified applicators. This should not be a problem for WPS trainers since the

noncertified applicator training content in § 171.201(d) is a subset of the WPS handler training content plus one point about the information that a certified applicator should provide to noncertified applicators. Lastly, in response to the commenter who requested that EPA allow certifying authorities to establish their own requirements for trainers of noncertified applicators, EPA notes that the final rule allows certifying authorities to set their own requirements for noncertified applicators and the supervision of noncertified applicators, including designating who is qualified to conduct training for noncertified applicators, as long as the certifying authority's requirements meet or exceed the requirements in § 171.201.

EPA does not plan to create train-the-trainer programs for trainers of noncertified applicators in the structural pesticide application industry or other pest control industries. However, certifying authorities may review for approval any such programs developed for use in their jurisdiction for State-designated trainers of noncertified applicators using RUPs.

C. Establish Qualifications for Certified Applicators Supervising Noncertified Applicators

1. Existing rule and proposal. The existing rule requires certified applicators supervising noncertified applicators to demonstrate a practical knowledge of Federal and State supervisor requirements related to the application of RUPs by noncertified applicators. The supervising certified applicator must be available if and when needed directly related to the hazard of the situation.

EPA proposed to require that certified applicators supervising noncertified applicators must meet the following requirements:

- Be certified in a category applicable to the supervised RUP use.
- Have practical knowledge of applicable Federal, State and Tribal supervisory requirements, including any on the label or labeling regarding use of RUPs by noncertified applicators.
- Be physically present when required by the product labeling.

EPA also proposed to make the certified applicator responsible for ensuring that each noncertified applicator meets certain requirements before using RUPs under the certified applicator's supervision. Specifically, noncertified applicators must:

- Be at least 18 years old.
- Have received the required training within the last 12 months.

- Have been instructed in the safe operation of equipment before use and within the previous 12 months.

- Have a copy of the full labeling in possession during use of the product.
- Have any label-required PPE (clean and in proper operating condition) and use it correctly for its intended purpose.

In addition, EPA proposed to require that the certified applicator supervisor must take the following actions:

- Prepare and maintain noncertified RUP applicator training records for two years from the date of meeting training requirements.
- Before each application made under the certified applicator's supervision, provide the noncertified applicator with use-specific instructions from the labeling, conditions of the application and how to use the application equipment.

- Ensure before each day of use that equipment is inspected and if worn or damaged, it is repaired or replaced.

- Ensure a method is available for immediate communication with the noncertified applicator.

EPA requested comment on but did not propose other restrictions related to supervision of noncertified applicators, including:

- Requiring the supervising certified applicator to be physically present with the noncertified applicator during application.
- Limiting the number of noncertified applicators that could be supervised by each certified applicator at any one time.
- Limiting the distance between the supervising certified applicator and noncertified applicator when the application is taking place.

EPA did not propose, but requested comment on whether certified applicators should be required to provide translators and/or translated labeling to non-English speaking noncertified applicators of RUPs.

2. Final rule. The final rule retains the proposed requirements with several changes. First, the final rule establishes a minimum age of 18 for noncertified applicators working under the direct supervision of certified applicators and adds an exception to the minimum age of 18 for noncertified applicators working under the direct supervision of private applicators when certain conditions are met. See Unit XIII. Second, rather than requiring the supervising certified applicator to provide a copy of each applicable product labeling to the noncertified applicator as proposed, the final rule requires the supervising applicator to ensure that at all times during a supervised RUP use the noncertified

applicator has access to relevant labeling. Third, the final rule clarifies that the use-specific instructions must be provided in a manner that the noncertified applicator can understand. Fourth, the requirement for use-specific instructions does not include instructions on how to use the application equipment nor does the certified applicator have to inspect the equipment before each use. Instead, the certified applicator must ensure the noncertified applicator has been instructed within the last 12 months in the safe operation of any equipment before mixing, loading, transferring or applying pesticides, and that before each day of use equipment is in proper operating condition as intended by the manufacturer and can be used without causing harm to the noncertified applicator, other persons, or the environment. Lastly, the final rule reorganizes the responsibilities of the certified applicator into three main sections: Qualifications of the supervising certified applicator, qualifications of the noncertified applicator and requirements the supervising certified applicator must ensure are met before a noncertified applicator uses an RUP under his or her supervision. The supervising certified applicator is responsible for ensuring compliance with all of these requirements.

Under the final rule, the supervising certified applicator must meet the following qualifications:

- Be certified in the category(s) applicable to the supervised use.
- Have practical knowledge of applicable Federal, State and Tribal supervisory requirements, including any requirements on the product label or labeling, regarding the use of RUPs by noncertified applicators.

Under the final rule, the supervising certified applicator must ensure each noncertified applicator meets all of the following requirements before using an RUP under his or her direct supervision:

- Be at least 18 years of age, except that a noncertified applicator must be at least 16 years of age if certain conditions are met. See Unit XIII. for the conditions of the exception.
- Meets at least one qualification for noncertified applicators outlined under the rule.

- Has been instructed within the last 12 months on the safe operation of any equipment used for mixing, loading, transferring, or applying pesticides.

Under the final rule, the supervising certified applicator must ensure the following conditions are met before a noncertified applicator uses an RUP under his or her direct supervision:

- The noncertified applicator has access to the applicable product labeling at all times during a supervised use.

- Where the labeling of a pesticide product requires PPE be worn for mixing, loading, application, or any other use activities, the certified applicator must ensure that the noncertified applicator has clean labeling-required PPE in proper operating condition, and that the PPE is worn and used it correctly for its intended purpose.

- The supervising certified applicator has provided the noncertified applicator, in a manner the noncertified applicator can understand, instructions specific to the site and the pesticide used, including labeling directions, precautions and requirements applicable to the specific use and site; how characteristics of the use site (*e.g.*, surface and ground water, endangered species, local population, and risks) and the conditions of the application (*e.g.*, equipment, method of application, formulation) might increase or decrease the risk of adverse effects.

- Equipment intended to be used for mixing, loading, transferring, or applying pesticides is in proper operating condition as intended by the manufacturer, and can be used without causing harm to the noncertified applicator, others, or the environment.

- Each noncertified applicator working under his or her direct supervision has a means to immediately communicate with the certified applicator.

- The certified applicator is physically present during use when required by the product labeling.

The final regulatory text for these requirements is located at 40 CFR 171.201(b).

3. Comments and Responses

Comments on the Certification Category of the Supervisory Applicator. Some certifying authorities and some advocacy organizations supported requiring the certified applicator to be certified in the same category as the supervised application. One certifying authority stated that it had interpreted years ago that the existing federal requirement was the same as EPA's proposal to require the supervisor to be certified in the category of supervised application.

Some certifying authorities, a grower organization, and an association of university extension programs were opposed to requiring the supervising certified applicator to be certified in the same category as the application. Instead, they requested that EPA allow certifying authorities to set

requirements, or that EPA permit the supervising applicator to be certified in any category.

Several certifying authorities misunderstood the proposal, and were concerned that persons who had qualified to be trainers of WPS handlers by completing a WPS Train-the-Trainer program would be able to supervise non-agricultural, noncertified applicators during RUP use.

Response. EPA is finalizing the proposed requirement that commercial applicators become certified in one or more categories applicable to the supervised RUP use. If an applicator certified in one category were allowed to supervise the use of an RUP by a noncertified applicator in an unrelated category, the certified applicator would be, through the actions of the supervisee, bypassing applicator certification requirements. Such an approach would allow any certified applicator to apply any category or RUP, simply by directing a noncertified applicator to do so. This would defeat the purposes of the certification categories.

EPA is aware that most certifying authorities do not have the same pesticide applicator categories as specified in the federal rule. Many certifying authorities have applicator categories separated out differently (*e.g.*, instead of "industrial, institutional, structural, and health related pest control" they might have separate category for each of those), with subcategories (*e.g.*, "structural—general pest control and structural—fumigation"). Under the final rule, the supervising certified applicator must be certified in the category applicable to the RUP used by the noncertified applicator.

Lastly, EPA seeks to clarify some commenters' misunderstanding of the proposal. EPA stresses that an RUP may only be used by a certified applicator or a noncertified applicator working under the direct supervision of a certified applicator. EPA notes that completing a WPS Train-the-Trainer program is not sufficient to qualify as a certified applicator. Only certified applicators may supervise the use of RUPs, so completion of a WPS train-the-trainer program alone is not sufficient qualification to allow a person to supervise RUP use by a noncertified applicator. EPA reminds readers that under the final rule, a person who has completed a WPS train-the-trainer course for pesticide handler training is qualified as a trainer of noncertified applicators; this qualification alone does not mean the trainer is a certified

applicator authorized to supervise noncertified applicators using RUPs.

Comments on Immediate

Communication. Many certifying authorities, university extension programs, a grower organization and an applicator organization requested that EPA allow any form of immediate communication to satisfy EPA's requirement for communication between the supervising certified applicator and the noncertified applicator. They explained that this would allow for changes in technology, give flexibility depending on the type of application and site involved, as well as permit many certifying authorities to keep their own communication requirements. The choice of communication methods may depend on many variables such as geography, cost, business model, portability and viability. One certifying authority and a grower organization suggested that if a type of application required a specific communication method between the supervisor and noncertified applicator, it should be required by labeling.

Several certifying authorities requested that EPA define "immediate communication" as voice-to-voice contact (cell phone or two-way radio), and prohibit texting, computer-generated voice paging or voicemail. Other certifying authorities supported establishing a definition of "immediate," but did not offer a suggested definition. One certifying authority preferred "a reasonable amount of time" instead of "immediate communication." One certifying authority noted that people are using video-conferencing applications on their cell phones to show the supervisor the situation in real time.

In the opinion of one certifying authority, communications technology such as cell phones or two-way radios are not cost prohibitive, and should be required by EPA. On the opposite side, a grower organization thought that EPA underestimated the cost for cell phone service because applicators may use their own cell phones but request reimbursement from the employer for cell phone service or a separate service.

One certifying authority was concerned that certified applicator supervisors cannot always comply with a requirement to be in "immediate communication" when there are areas lacking cell phone coverage. The same commenter also asserted that immediate communication is not always necessary for all types of application, but when it is warranted it should be added to the product label's requirements instead.

Response. EPA is aware of the need for flexibility, and therefore the final

rule does not restrict or define “immediate communication” as a specific method of communication or with a limit on travel distance or time. EPA agrees with commenters who noted there are many variables related to communication with a noncertified applicator. In some situations the certified applicator supervisor may need to be within eyesight while in other situations they could supervise adequately away from the RUP use site. When a certified applicator is within the line of sight or earshot, face-to-face oral communication may be sufficient. Where cell phone service is lacking, supervisors and noncertified applicators could use two-way radios or satellite phones. EPA does not expect that there are many situations in which all forms of immediate communication between the supervisor and noncertified applicator would be impractical. However, as with many parts of the final rule, certifying agencies may propose to include in their certification plans other requirements related to supervision of noncertified applicators that would provide protection in such scenarios that would meet or exceed EPA’s standards (see 40 CFR 171.303(b)(5)(iii)). As noted by commenters, additional limits and restrictions may be included in the labeling.

EPA disagrees with commenters who allege that the estimated cost of cell phone service in the Economic Analysis for the proposal was not accurate. EPA recognizes that some noncertified applicators might request reimbursement from their supervisors for their cell phone bills or request to be issued a work-only cell phone. However, EPA stands by the assumption that the costs for the immediate communication requirements are negligible because EPA expects that use of a cell phone by noncertified applicators to contact a supervising certified applicator will be infrequent compared to use of a cell phone for personal reasons. However, EPA maintains that the costs for the final requirement are negligible because cell phone use would be limited to emergencies or unexpected situations.

Comments on Providing a Copy of the Labeling. One certifying authority mentioned that the difficulty of obtaining the most current labeling from retail or wholesale suppliers could be a compliance problem. Several certifying authorities questioned the need to provide the labeling if the supervising certified applicator is required to review the use-specific information from the labeling in person with the noncertified applicator. Several grower associations

argued that even if the noncertified applicator was given a copy of the labeling, the certified applicator may not be present to verify that they have the labeling with them at all times. Two grower organizations asserted that providing the noncertified applicator with a copy of the labeling is redundant because it is already on the container of the product they are about to use, and the WPS requires that agricultural handlers have access to labeling. One certifying authority remarked that a labeling would not be useful to a Spanish-speaking noncertified applicator.

One application company pointed out that the proposed requirement to “ensure that the applicator have the full labeling for the product in their possession during use” can be problematic for some application types. They claim that in some areas, “possession” means “on the person.” The commenter suggested that when it is impractical for the person to have the labeling on them, they should be allowed to have the label in the truck and accessible in a reasonable amount of time.

Response. In response to the comments, EPA has revised the proposed requirement. The final rule requires the supervising certified applicator to ensure that the noncertified applicator has “access to” the labeling at all times during use of an RUP, rather than the proposed requirement to provide a copy of all applicable labeling to the noncertified applicator. The final requirement achieves EPA’s intention to allow the noncertified applicator to quickly and easily access the labeling when a question arises or in the event of an emergency, and does not require each noncertified applicator to have a copy of the labeling on his or her person.

EPA acknowledges that the final rule does impose specific requirements on the supervising certified applicator to provide use-specific instructions, ensure equipment is operating properly, provide and ensure proper use of PPE, and provide a means for the noncertified applicator to communicate with the supervisor. These requirements do not negate the need for the noncertified applicator to have access to the product’s labeling during use. The labeling provides important information on use directions, environmental precautions, and how to deal with an emergency. Noncertified applicators who do not speak English can request assistance in consulting the labeling from someone at the application site who does speak English, but would not

be able to do so absent the requirement that they have access to the labeling.

Comments on a Maximum Physical Distance or Travel Time between the Supervising Certified Applicator and the Noncertified Applicator. EPA requested comment on, but did not propose, a maximum physical distance or travel time between the supervising certified applicator and noncertified applicator using RUPs under his or her direct supervision. A few certifying authorities and a worker/handler advocacy organization supported EPA setting a maximum distance. One certifying authority requested that the supervisor be required to be within a maximum distance of two hours of the application site, in addition to a requirement of real-time, immediate communication. Many certifying authorities and a worker/handler advocacy organization supported a combination of a maximum travel time (or a “reasonable distance”) and immediate communications. One certifying authority proposed that EPA require the supervising certified applicator to be able to reach the noncertified applicator during RUP use within “a reasonable amount of time,” rather than a set maximum length of travel time. One certifying authority, several grower groups, and a few other commenters favored an either/or approach, such as a maximum 30 minutes travel time or immediate communications via voice, two-way radio or cell phone connection. Many worker/handler advocacy organizations suggested EPA adopt California’s requirements that the certified applicator be aware of site conditions and able to halt the application when warranted (such as for inclement weather), and that the noncertified applicator have a means to contact the supervisor if problems arise.

One county government and an advocacy organization requested that EPA require on-site supervision. They explained that the supervising certified applicator should be present to help respond to emergencies and urgent questions, that application sites can be far away from the office, and that every second counts in an emergency. Several certifying authorities encouraged EPA to allow “on-site” supervision as an option, especially for noncertified applicators who speak another language or cannot pass an exam.

Many certifying authorities, some university extension programs, an association of university extension programs, an agricultural organization and a Federal agency opposed EPA setting a maximum distance between the supervising certified applicator and noncertified applicators using RUPs

under his or her direct supervision. One commenter noted that it would be difficult to calculate the specific distance or time in remote areas, and immediate communication between the supervisor and noncertified applicator should be sufficient. The commenter explained that the characteristics of a site are highly variable depending on “the type of application, product being applied, industry operating procedures, geographic locations, etc.” Although some certifying authorities included in their comments a description of their existing time or distance requirements related to supervision of noncertified applicators, they opposed a federal requirement based on the variety of existing requirements across the country.

Some certifying authority commenters recommended defining “direct supervision” as being within “eye and earshot” for commercial applicators and as being available “if and when needed” for private applicators, or being within the line of sight or hearing distance during an RUP use. Some certifying authorities recommended establishing a distance/travel time of three hours, or a distance of one hour/50 air miles. Some commenters opposed to establishing a national standard for distance or time between the supervising certified applicator and noncertified applicators under their supervision supported EPA allowing certifying authorities to set their own requirements. One grower was against requiring on-site supervision. One certifying authority and several worker/handler organizations said the availability of the supervisor should be proportional to the potential or actual hazard of the situation. One certifying authority commented that the real concern should be the effectiveness of the supervision, not a distance.

Response. In response to commenters’ concerns and for the reasons outlined in the proposal (Ref. 17, pp. 51383–51384), EPA is not establishing a maximum time or distance between the supervising certified applicator and noncertified applicators using RUPs under his or her direct supervision. It is evident from the comments that situations can vary greatly depending on factors such as geographic locations, State and site characteristics, and type of application. The comments have not significantly clarified EPA’s questions about the practicality or the potential for risk reduction that might result from requiring any particular time or distance between certified applicators and noncertified applicators using RUPs under their direct supervision. However, certifying authorities may

retain their existing maximum time and/or distance limits, or set new limits if they choose.

Comments on Limiting the Number of Noncertified Applicators under the Direct Supervision of a Certified Applicator. EPA requested comment on an alternative to the proposal about setting a limit on the number of noncertified applicators that one certified applicator could supervise at a time. A few certifying authorities were in favor of such a limit. One alleged they knew of companies that allowed the certified applicator to supervise an “unreasonably large number” of noncertified applicators. Another set a limit of 15 persons, of which only eight could be noncertified applicators, while another is promulgating regulations to set a 12-person limit. One certifying authority suggested that EPA impose a limit on the number of noncertified applicators that a certified applicator could supervise only when the noncertified applicator qualified by taking training rather than by passing the core exam.

Many certifying authorities and an applicator organization opposed any federal limit to the number of noncertified applicators supervised by one certified applicator at any one time. Instead, they expressed a preference for EPA to allow certifying authorities to set their own limits, especially since there are so many variables involved. One certifying authority asserted that they have not set a limit because they say they never experienced a problem. One certifying authority that opposed EPA establishing any limit on the number of persons that could be supervised by a single applicator commented that they set a 20-person supervising limit after discovering that one company allowed a ratio of 50 noncertified RUP applicators to one certified applicator. One organization of certifying authorities suggested that any limit would be seen as an arbitrary number.

Response. The comments have not significantly clarified EPA’s understanding of the practicality or the potential for risk reduction that might result from a national limit on the number of noncertified RUP applicators one certified applicator can supervise at a time. EPA has decided not to establish a federal requirement; however, certifying authorities retain discretion to establish their own maximum time and/or distance limits within their jurisdiction.

Comments on Inspecting Equipment Each Day before Use. One certifying authority, an applicator organization and a university extension program opposed a federal requirement that the

certified applicator supervisor inspect equipment each day before use. Commenters asserted their experience that most applicators and their supervisors make a daily visual inspection of application equipment. They were concerned that as written, the proposed requirement would be difficult to comply with because many parts of the equipment are not easy to access (e.g., the proposal would require supervisors to disconnect and take apart hoses to see if there was a clog). Instead, one commenter suggested that EPA amend the proposal to require that the equipment be “visually inspected for leaks or damaged parts.” On the other hand, several commenters asserted that it would be difficult to enforce a requirement to visually inspect equipment.

Response. In response to commenters’ concerns, EPA has revised the final requirement. The final rule requires that the supervisor ensure equipment used for mixing, loading, transferring, or applying pesticides is in proper operating condition as intended by the manufacturer, and can be used without causing harm to the noncertified applicator, others, or the environment. EPA expects that the certified applicator could accomplish this requirement in various ways such as visually inspecting the equipment, testing the equipment, or using the equipment before use by any noncertified applicator under his or her direct supervision. If the supervising applicator finds leaks, clogging, or worn or damaged parts, the equipment must be repaired or replaced before use in order to meet the requirement that it be in proper operating condition as intended by the equipment manufacturer.

Comments on Providing PPE. One professional organization of university extension programs and one of their members suggested that the certified applicator be required to give the noncertified applicator the proper PPE in good condition along with training on the correct use, but not be responsible for the noncertified applicator ultimately wearing and using it correctly. They explained it was impractical given that the supervisor may not be on site and that the noncertified applicator must take sole responsibility for wearing and correctly using PPE as trained.

Response. Neither the proposed rule nor the final rule specifies the steps a supervising certified applicator must take in order to ensure that the noncertified applicator wears and uses PPE correctly for its intended use. In some cases, it may be reasonable and appropriate for the supervisor to trust an

experienced noncertified applicator to wear and use PPE properly without any oversight, while in other cases, it may be necessary to supervise closely and consistently. The PPE requirements specified on pesticide labeling are necessary to prevent unreasonable adverse effects, and the certified applicator is responsible for ensuring that those requirements are met. Accordingly, the final rule requires the supervising certified applicator to ensure the noncertified RUP applicator wears or uses any label-required PPE correctly for its intended purpose.

Comments on Site-Specific Instructions before Each Application. One application company, many applicator organizations and several certifying authorities emphatically opposed a requirement to provide site-specific instructions to the noncertified applicator before each application. They explained that it would be unmanageable because many certified and noncertified applicators routinely service 10 or more sites each day. Instead, commenters recommended that noncertified applicators be able to rely on their training and professional judgment based on site conditions along with the option to contact their supervisor in the event of any questions or problems. One applicator association asked EPA to clarify the meaning of “site-specific” and interpreted EPA’s proposal as requiring a “site-specific plan.” One certifying authority asserted its belief that its existing requirements satisfy the proposed requirement.

Response. In the final rule EPA defines “use-specific instructions” as the information and requirements specific to a particular pesticide product or work site that an applicator needs to use the RUP in accordance with applicable requirements without causing unreasonable adverse effects. EPA’s intention is that the certified applicator make the noncertified applicator aware of labeling requirements and site-specific conditions that are critical for safe use, or that may not be obvious and/or could be problematic. The final rule does not require the supervising certified applicator to be physically present, but it does require that the supervisor learn enough about the site that he or she can give the noncertified applicator instructions adequate to prevent unreasonable adverse effects. The supervisor is responsible for ensuring that the RUP application conforms to the labeling and does not result in misuse by the noncertified applicator. Therefore, it is up to the supervising certified applicator to familiarize him or herself with the application site (first-

hand or through reliance on others) and provide the noncertified applicator the particular use and site-specific information necessary to prevent unreasonable adverse effects.

Comments on Translation Needs. Two certifying authorities requested that certifying authorities be allowed to determine whether there is a need for translators and label translations. Many worker/handler organizations emphasized the need for English/Spanish bilingual product labeling. In the absence of bilingual labeling, these organizations urged EPA to require that the supervisor take steps to ensure that noncertified applicators understand all of the safety information on the RUP labeling.

Response. The final rule requires certified applicators to provide use-specific instructions to noncertified applicators in a manner the noncertified applicator can understand. Apart from this requirement, the final rule allows certifying authorities to decide whether to require that labeling be translated. EPA has been developing a pilot project to test the usefulness of translated labels (or sections of labels) for Spanish-speaking noncertified applicators, but it is in too early a stage to inform this rulemaking.

Comments on Supervisor Qualifications. One certifying authority commented that supervisors should demonstrate practical knowledge of supervisory requirements by adding it to core training.

Response. EPA agrees that certified applicators who would supervise noncertified applicators should have practical knowledge of supervisory requirements. In both the proposal and the final rule, EPA added competency standards related to the “responsibilities of supervisors of noncertified applicators,” for both commercial applicators (in the core competency standards, 40 CFR 171.103(c)(9)) and private applicators (in the general competency standards; 40 CFR 171.105(a)(9)). This standard addresses understanding and complying with the requirements for supervisors of noncertified applicators in the rule, providing use-specific instructions to noncertified applicators, and explaining appropriate State, Tribal, and Federal laws and regulations to noncertified applicators.

General Comments. Many worker/handler advocacy organizations urged EPA to adopt language providing that the supervising applicator’s license (*i.e.*, certification document allowing them to purchase and use RUPs) may be refused, revoked or suspended by the certifying

authority if negligent in their supervisory duties.

Response. The final rule requires certifying authorities to include in their certification plans provisions for reviewing, and where appropriate, suspending or revoking an applicator’s certification based on proven violations of FIFRA or state laws or regulations relevant to the certification plan. Pursuant to those certification plan provisions, EPA expects that all certifying authorities will be able to refuse, revoke or suspend the license of a certified applicator supervisor whose neglect of supervisory responsibilities results in a proven violation of FIFRA or relevant State law.

XI. Expand Commercial Applicator Recordkeeping To Include Noncertified Applicator Training

A. Existing Rule and Proposal

The existing rule does not require training of noncertified applicators, and consequently does not require training records.

EPA proposed to require commercial applicators to collect and maintain records for each noncertified applicator using RUPs under their direct supervision for two years from the date of the noncertified applicators meeting the necessary qualifications. EPA proposed that the records include:

- The noncertified applicator’s printed name and signature.
- The date the noncertified applicator completed the required training.
- The name of the person who provided the training or the certifying agency, as applicable.
- The supervising certified applicator’s name.

B. Final Rule

In the final rule, EPA revised the requirement to document noncertified applicators’ qualifications. The final rule separates the records to be maintained by the method of qualification for the noncertified applicator. For records documenting compliance with the training outlined at 40 CFR 171.201(d), the final rule does not require that the record include the supervising certifying applicator’s name or the name of the certifying agency. In addition to the name of the person who provided the training, the final rule requires the record to include the title or description of the training. For records documenting qualification by having valid training as a handler under the WPS, the rule specifies that the records documenting completion of training under the WPS satisfy the requirements under this rule. For

documenting qualification by a method established by the certifying authority, the final rule requires documentation of the qualification as required by the certifying authority. Finally, for documenting qualification by being a certified applicator not certified in the category or jurisdiction of the supervised application, the rule requires the record to include the noncertified applicator's name, the certification number and expiration date of the certification, and the certifying authority that issued the certification.

The final rule also adjusts the proposed requirement related to recordkeeping. As an alternative to requiring the supervising commercial applicator to create and maintain records, the final rule requires the supervising commercial applicator to create and maintain, or verify the existence of and have access to the training record. In addition, the final rule requires that the records be retained for two years from the date of use of the RUP by the noncertified applicator rather than two years from the date of meeting the qualification, as described in the proposal.

The final regulatory text for this requirement is located at 40 CFR 171.201(e).

C. Comments and Responses

Comments. EPA received several comments on the recordkeeping requirement for noncertified applicator training. Two certifying authorities opposed a recordkeeping requirement for noncertified applicator training. One commenter asserted that the proposed recordkeeping requirement would add to the recordkeeping burden for WPS handler training. A grower organization recommended the use of a simple form with a signature to be kept in the personnel file. Some commenters noted that a noncertified applicator may work under the supervision of multiple certified commercial applicators while employed by one business, resulting in duplicative records of meeting the training requirement. No commenters responded to EPA's question of whether the noncertified applicator should receive a copy of the training record.

Response. Training reduces the chance that RUP applications will result in unreasonable adverse effects. It is reasonable to expect that requiring documentation of the training will increase the likelihood of noncertified applicators receiving training.

The WPS requires agricultural and commercial handler employers to maintain records of handlers' completion of the training requirements. An agricultural or commercial handler

employer could rely on the training record required by the WPS to satisfy the recordkeeping requirements under this final rule and those under the WPS.

EPA notes that certified applicators supervising noncertified applicators may develop and use a simple form as long as the form contains or can be filled in with all of the information required by the rule. For example, if a pest control company employs the same trainer and uses the same materials, that information could be pre-printed on the form; the remaining, noncertified applicator-specific information, such as the date of the training and the noncertified applicator's name and signature would need to be completed on an individual basis.

Further, EPA addressed this comment in the final rule by requiring the certified applicator to create or verify the existence of training records and to have access to them during the two year retention period, rather than retaining the proposed requirement for each supervising certified applicator to collect and maintain the records. EPA has amended the recordkeeping to delete the requirement for the record to include the supervising applicator's name. EPA expects that the language in the final rule would allow an operation in which multiple commercial applicators may supervise the same noncertified applicator to maintain one copy of the necessary record that is accessible to all supervising certified applicators. It would also allow that where a noncertified applicator changes employers and brings a copy of his or her training record, the new supervising certified applicator may comply with the training and recordkeeping requirements by making and retaining a copy of that training record.

XII. Establish Minimum Age for Certified Applicators

A. Existing Rule and Proposal

The existing rule does not establish any age restriction for certified applicators. EPA proposed to establish a minimum age of 18 for any person to become certified as a private or commercial applicator.

B. Final Rule

The final rule prohibits persons younger than 18 years old from being certified as a commercial or private applicator to apply RUPs. The final regulatory text for these provisions are located at §§ 171.103(a)(1) and 171.105(g), respectively.

C. Comments and Responses

Comments. Many commenters expressed support for establishing a

minimum age of 18 for certified commercial applicators, including certifying authorities, farmworker advocacy organizations, pesticide applicator associations, and small entity representatives. Commenters expressed less support for establishing a minimum age of 18 for certified private applicators. Some commenters addressed minimum age requirements generally for all applicators of RUPs and did not distinguish between certified and noncertified applicators under the supervision of a certified applicator. General comments covering the minimum age and those specific to certified applicators are summarized in this Unit, while comments specific to establishing a minimum age for noncertified applicators applying RUPs under the supervision of a certified applicator are addressed in Unit XIII.

Comments in support of a minimum age of 18 for all applicators of RUPs highlighted the protection of children, the environment and others from pesticide exposure. Commenters, including those from farmworker advocacy organizations, noted that adolescents' bodies are still developing and they may be more susceptible to the effects of pesticide exposure. Commenters also noted that adolescents are less mature and their judgment is not as well developed as that of adults. This immaturity may mean that adolescents may be less consistently aware of risks associated with handling and applying RUPs, that they may not adequately protect themselves or others from known risks, and that spills, splashes, and improper handling practices may be more likely. In addition, a few commenters noted that persons under 18 years old are protected in other industries by OSHA and should receive similar protections under this rule, and that many States have already set a minimum age for certification of applicators. Some supporters considered the proposal a logical step to protect youth and noted that it is consistent with the minimum age of 18 in the revised WPS for agricultural pesticide handlers and early-entry workers in pesticide treated areas.

On the other hand, some commenters did not agree with the EPA's rationale for proposing a minimum age and did not consider age as determining competency. These commenters noted that applicators are determined to be competent when they pass certification exams, which have been established as the gauge of competency to determine who can apply RUPs. A few commenters asserted that the proposal did not have sufficient quantifiable

benefits related to establishing a minimum age.

Some commenters recommended alternatives to the proposed minimum age of 18. The Small Business Administration Office of Advocacy recommended that EPA follow the recommendations of the SBAR panel, which was to consider establishing a minimum age of 18 for commercial applicators, 18 for hired private applicators, and 16 for private applicators that are family members, with a grandfather clause to allow currently certified applicators to retain their certification after the minimum age requirement becomes effective.

Some commenters opposed establishing any minimum age. Some certifying authorities and farm bureaus asserted that establishing any minimum age for pesticide applicators of RUPs is a matter that should be determined by the States, not EPA. A few of these commenters asserted that EPA should not take any action because the DOL's hazardous occupations orders under the Fair Labor Standards Act (FLSA) already prohibit adolescents under 16 years old from handling pesticides in toxicity categories I and II in agriculture with limited exceptions. Some commenters supported establishing a lower minimum age of 16 for all applicators of RUPs, applicators from small and family businesses, and/or youth in educational/vocational programs. Many of these comments expressed concerns for fiscal impacts and hardships to family businesses if the proposed minimum age of 18 were finalized.

Some certifying authorities expressed concerns about the burdens and political difficulty of implementing a minimum age requirement, including the need to make legislative and/or regulatory changes in order to establish or change a minimum age, and the burden to verify and track the age. A few commenters expressed concern in handling personally identifiable information (PII). A commenter requested that the requirement include a phased implementation to allow youth already certified to apply RUPs be grandfathered in. A few certifying authorities expressed doubt that they could effectively manage and track exceptions or exemptions to the minimum age or purchase of RUPs.

Certifying authorities and pesticide applicator associations expressed an understanding that the proposed rule would apply to applicators using RUPs. However, they noted that certifying authorities have long required commercial applicators to be certified regardless of whether they use RUPs,

non-RUPs or both. Many certifying authorities expressed concern that the rule could have a significant impact on non-RUP applicators, and cause substantial hardships within the agricultural community and in some nonagricultural industries, such as structural pest control. Some certifying authorities asserted that certifying agencies could not manage and track separate non-RUP and RUP programs, and therefore, a minimum age requirement in effect would be applied to both types of applicators. A few certifying authorities highlighted the benefits of requiring certification for all commercial applicators (demonstrated competency to apply pesticides safely, even if not using RUPs), which would be lost if a certifying authority opts to remove the broader commercial applicator certification requirements when developing and implementing a revised certification plan. A few commenters requested that EPA issue a specific clarification that the minimum age requirement is only intended to apply to RUPs.

Many certifying authorities generally supported a minimum age of 18 specifically for commercial applicators. A number of certifying authorities supporting a minimum age of 18 already have a minimum age of 18 for commercial applicators. Some of these certifying authorities commented that a federally-required minimum age would have little or no impact on their certification programs. A few certifying authorities expressed a belief that they have few applicators under the age of 18, and therefore, again, the proposed minimum age requirement would have little impact. A few certifying authorities supporting the proposed minimum age highlighted that adults, those persons over the age of 18 years old, can ordinarily be held legally responsible for their actions; adolescents, those persons under the age of 18, are less likely to be held legally responsible for their actions. Alternatively, a few commenters asserted that the certified applicator is legally responsible regardless of the age.

Comments were generally less supportive of a minimum age of 18 for private applicators than for commercial applicators. Comments opposing the proposed minimum age of 18 for private applicators emphasized concerns for impacts to family farms. Many commenters representing certifying authorities, pesticide applicator associations, small business advocates and applicators recommended that EPA consider the impacts of a minimum age to family farms. A few commenters expressed general support for a

minimum age of 16 for private applicators. Other commenters who supported establishing a minimum age of 16 noted that this requirement would align with DOL's restriction on handling pesticides in toxicity categories I and II in agriculture. A few commenters suggested establishing a minimum age of 16 or including an exemption from the minimum age for private applicators that certify through training courses provided by technical or vocational schools.

Some commenters requested that EPA add an exemption from any minimum age requirement for members of immediate family on family-owned farms. Some commenters supported adding an exception to the minimum age requirement for members of the farm owner's immediate family, similar to the WPS exemption. Some commenters in support of an exemption for immediate family recommended applying the same definition for immediate family in the WPS to this rule. Some commenters requested that EPA outline criteria for an exemption for youth education and vocational programs. A few commenters recommended that EPA establish a minimum age of 16 for certain educational programs. Some commenters expressed concerns for impacts of a minimum age on nonagricultural family businesses, small businesses, and businesses that hire seasonal workers and recommended that EPA establish exemptions for these commercial applicators to obtain certification while under the age of 18. Other commenters asserted that adolescents' developmental status does not differ whether they are an employee on a farm owned by an immediate family member or by someone unrelated to them, and therefore, are opposed to any exception to a minimum age requirement.

Responses. Based on the comments received and an evaluation of existing literature related to adolescents' development of maturity and judgment, EPA has decided that the benefits of restricting certification to use RUPs to persons at least 18 years old justify the costs; the final rule prohibits persons under 18 years old from becoming certified to apply RUPs. EPA recognizes that adolescents' bodies and judgment are still developing. While studies have not demonstrated a clear cut off point at which adolescents are fully developed, literature indicates that their development may continue until they reach their early to mid-20s. EPA also agrees that research has shown that adolescents may take more risks, be less aware of the potential consequences of their actions on themselves and others,

and be less likely to protect themselves from known risks. All of this information supports a minimum age of 18 years old in order to allow those applying RUPs to develop more fully before putting themselves, others, and the environment at risk.

EPA agrees that it is appropriate to take reasonable precautions to protect adolescents from pesticide exposures, both because of the potential impact of pesticides on further development and because adolescents may not properly appreciate (and take appropriate steps to avoid) the risks of potential pesticide exposure (Ref. 17, pp. 51385–51388). Although EPA is not able to measure the full benefits that accrue from reducing chronic exposure to pesticides, well-documented associations between pesticide exposure and certain cancer and non-cancer chronic health effects exist in peer reviewed literature. See the Economic Analysis for this rule for a discussion of the peer-reviewed literature (Ref. 1). While statistical associations have been observed in studies that estimate the relation between pesticide exposure and chronic health outcomes such as cancer, the causal nature of these associations has not yet been determined; thus quantifying the magnitude of the chronic health risk reduction expected as a result of pesticide exposure reduction is not possible. However, based on what is known about the potential for biologically active chemicals generally to disrupt developmental processes, it is reasonable to have heightened concern for adolescents under the age of 18 in situations where they face particularly high pesticide exposures and exposure to pesticides classified as RUPs. Although EPA agrees that certification exams are a gauge of competency, they are not the only relevant gauge, and EPA disagrees with the contention that age should not be a consideration for determining competency. Generally prohibiting adolescents under the age of 18 from applying RUPs will protect them from any potential risks of using RUPs, ensuring that adolescents do not cause or suffer unreasonable adverse effects from using RUPs.

EPA recognizes that DOL prohibits persons under 18 years old from engaging in hazardous tasks in other industries, and that some certifying authorities have taken action to prohibit certain adolescents from applying RUPs (minimum ages for applicators of RUPs, where established, range from 16 years old to 18 years old). These examples of protections for adolescents in other industries or by certifying authorities reflect a broader societal agreement that

some workplace activities are inappropriate for adolescents. Use of RUPs is reasonably included among those workplace activities considered inappropriate for adolescents.

EPA disagrees with commenters' request to establish a minimum age lower than 18 for certified applicators. While there is no single, definitive age where one passes from immature judgment to mature judgment (research shows that brains continue to develop until people are in their early to mid-20s), the minimum age to engage in many hazardous activities has been established as 18 years old. EPA acknowledges that, in the event of a mishap with potential legal consequences, the certified applicator is responsible. However, it may not be possible to hold a person who is not at least 18 years old legally responsible for such a mishap. Requiring all certified applicators to be at least 18 years old will ensure all certified applicators can be held legally accountable in the event of violations of FIFRA and other State or Tribal laws.

EPA has established a minimum age of 18 for employees who are not immediate family members and who handle agricultural pesticides or enter treated areas while a restricted entry interval is in effect under the WPS (known as early-entry workers). 40 CFR 170.309(c), 170.313(c), 171.605(a). EPA agrees that restricting youth from applying RUPs in non-agricultural is consistent with EPA's decision to require a minimum age of 18 for handlers in the WPS (Ref. 36, p. 67525). Irrespective of the decision in this certification rule, persons using RUPs in agriculture will be subject to the WPS age limit where applicable beginning January 2, 2017, the compliance date for the recent WPS revisions.

EPA also disagrees with commenters' assertions that EPA should defer to certifying authorities or the FLSA and not establish any age-related restrictions related to use of RUPs. EPA has the responsibility under FIFRA to regulate the use of pesticides to avoid unreasonable adverse effects, apart from any requirements established by other federal or state laws. The DOL's actions under the FLSA limiting the use of certain pesticides to persons at least 16 years old do not preclude EPA from taking actions to ensure that human health and the environment are protected from unreasonable adverse effects of pesticides. While DOL's hazardous occupations order prohibiting those under 16 years old from handling certain pesticides satisfies the purposes of the FLSA, those purposes are distinct from those of

FIFRA. EPA has concluded that because, as discussed previously, adolescents' bodies, maturity, and judgment are still developing, the application of RUPs by persons under 18 years old presents an unreasonable likelihood of adverse effects. Therefore, the final rule generally limits the application of RUPs to persons who are at least 18 years old.

EPA acknowledges that the minimum age requirement may require changes in legislation, regulation, and/or Tribal code in some States or Indian country. In the final rule, EPA has revised the proposed implementation provisions to provide adequate time for certifying authorities to make the necessary legislative and regulatory changes. In response to comments (such as those provided by the Small Business Administration Office of Advocacy) requesting that certified applicators who are not 18 when the final rule, including the minimum age requirement, is implemented be allowed to retain their certification, a certifying authority may allow applicators who hold a valid certification but who are not at least 18 years old at the time the revised certification plan is implemented to retain their existing certifications; however, once certifying authorities implement plans complying with this rule, no one under 18 years old may obtain an initial certification. See Unit XX. on implementation of the final rule.

In addition, EPA recognizes some certifying authorities may need to revise their tracking systems as part of their process to verify the age of those seeking initial certification. The final rule requires certifying authorities to verify the identity and age of a person as part of initial certification. Verifying the identity of certification candidates through a government-issued photo identification or other comparable method should provide the age-specific information needed to verify the person meets the minimum age requirement. In response to concerns about collection and retention of PII, EPA notes that the final rule has no requirements to maintain records of birth dates, so concerns about PII are not warranted. There is no recordkeeping requirement related to minimum age. See Unit IX. on exam administration, for more discussion on identification needed at time of initial certification.

Although this rule applies only to RUP use, EPA recognizes that many certifying authorities have established certification programs for commercial applicators that do not distinguish between applicators of RUPs and non-RUPs. Certifying authorities have the discretion to apply the minimum age

requirement to both non-RUP and RUP certifications or to make the necessary changes to separate and manage non-RUP and RUP certifications. EPA agrees that applicators of non-RUPs benefit from the training and certification programs and supports their continuation; although this rule regulates the application of RUPs and does not directly impose a minimum age on the commercial applicators of non-RUPs, EPA believes the minimum age requirement may provide additional benefits in reduction of pesticide exposures in States with combined certification programs by preventing youth from applying any pesticide commercially. Few certifying authorities combine non-RUP and RUP certifications for private applicators, and moreover, EPA notes that beginning January 2, 2017, persons using both RUP and non-RUP agricultural pesticides will be subject to the WPS age limit where applicable. Therefore, EPA believes the minimum age requirement will not significantly impact private applicators' use of non-RUPs.

EPA recognizes that some family-owned farms or family-owned businesses may employ members of the owner's immediate family who are under 18 years old to apply RUPs. However, EPA agrees with commenters who noted that adolescents' developmental status does not differ if they are employees on a farm owned by an immediate family member or by someone unrelated to them. Due to the risk to the applicator, environment and public health if RUPs are not applied properly, EPA has decided to restrict certification as a private or commercial applicator to persons at least 18 years old. EPA is not allowing a lower minimum age or exemption from the minimum age requirement for certification for applicators working on family farms or for family businesses, for small businesses, or hired seasonally/temporarily. EPA recognizes the benefits to adolescents and society of vocational education and training programs. Adolescents may participate in these programs but will be required to be at least 18 years of age before being eligible to be a certified applicator of RUPs. However, as discussed in Unit XIII., EPA is accommodating the needs of family-owned farms by allowing an exception in limited circumstances for noncertified applicators using RUPs under the supervision of a certified private applicator who is also an immediate family member.

XIII. Establish Minimum Age for Noncertified Applicators

A. Existing Rule and Proposal

The existing rule does not establish a minimum age for noncertified applicators using RUPs under the direct supervision of a certified applicator. EPA proposed to require that noncertified applicators who use RUPs under the direct supervision of a certified applicator be at least 18 years old.

B. Final Rule

The final rule establishes a minimum age of 18 for noncertified applicators applying RUPs under the direct supervision of certified applicators. The rule includes an exception to the minimum age requirement; noncertified applicators supervised by a certified private applicator who is also an immediate family member must be at least 16 years old. The exception does not apply to soil and non-soil fumigation, aerial applications, and use of predator control products (sodium cyanide and sodium fluoroacetate); these uses require the noncertified applicator to be at least 18 years of age and the supervising private applicator to be certified in the appropriate category for fumigation, aerial application, or predator control.

The final regulatory text for this requirement and the exception is available 40 CFR 171.201(b)(2)(iii).

C. Comments and Responses

Comments. Some commenters supported establishing a minimum age of 18 for noncertified applicators. Fewer commenters supported establishing a minimum age of 18 for noncertified applicators applying RUPs under the direct supervision of private applicators. The Small Business Administration Office of Advocacy recommended that EPA follow the recommendations of the SBAR panel to consider establishing a minimum age of 18 for noncertified applicators applying RUPs under the direct supervision of commercial applicators and 16 for noncertified applicators applying RUPs under the direct supervision of private applicators. Commenters supporting a minimum age of 18 for noncertified applicators highlighted the protection of children, environment and others from pesticide exposure. Some commenters opposed to the proposed minimum age of 18 suggested that EPA establish a lower minimum age requirement of 16 years old for all noncertified applicators. Some commenters did not support establishing any minimum age requirements. See in Unit XII. for

general comments in support of and opposition to the proposed minimum age requirement for applicators of RUPs.

A few commenters did not agree with EPA's rationale for proposing a minimum age, and instead suggested that EPA emphasize improving the competence of noncertified applicators. A commenter cited information to support adolescents' cognitive capabilities and reasoning skills as well-developed in early adolescence (Refs. 15 and 45). A few alternatives to the minimum age requirement suggested by commenters include requiring noncertified applicators to take an exam, allowing noncertified applicators to obtain a provisional certification, or requiring classroom and hands-on experiences to develop competency in adolescents. One commenter recommended that EPA allow an applicator to be under the age of 18 when the individual provides a signed approval from a parent or guardian. Some certifying authorities and farmworker advocacy organizations opposed any use of RUPs by noncertified applicators; they suggested that all persons using RUPs should be certified.

Few certifying authorities require a minimum age for noncertified applicators of RUPs. Commenters opposed to establishing a minimum age of 18 for noncertified applicators emphasized concerns for impacts to family farms, businesses and youth in vocational/educational programs. Many commenters from certifying authorities, grower organizations, and applicators recommended that EPA consider the impacts of a minimum age to family farms. A few commenters expressed support for a minimum age of 16 for immediate family members. A few commenters who supported a minimum age of 16 noted that this requirement would align with DOL's restriction on handling pesticides in toxicity categories I and II in agriculture. Some commenters opposed establishing any minimum age for immediate family members applying RUPs on family farms.

Some commenters requested that EPA add an exemption from any minimum age requirement for immediate family members on family-owned farms. Commenters supported adding an exception for members of the owner's immediate family similar to the exemption to the minimum age requirements under the WPS. Commenters suggested applying the same definition for immediate family in the WPS to this rule.

In the case of family-owned commercial businesses, a few

commenters expressed concerns that limiting noncertified applicators to those at least 18 years old would prevent younger family members from learning the family business, such as in lawncare and landscape businesses and in the structural pest control industry. Some commenters expressed concerns for commercial businesses that hire seasonal or temporary workers, such as lawncare and landscape businesses.

Some commenters, including university extension services and certifying authorities stated the proposed minimum age requirement would negatively impact adolescent education and vocational programs in high schools, such as Future Farmers of America and 4-H. Some commenters requested that EPA outline criteria for an exemption for participants in these types of programs. One commenter suggested an exemption to the minimum age requirement with parental approval for adolescents to apply RUPs. Several commenters speculated that RUPs may not be widely applied in these programs. However, other commenters pointed out that non-RUPs and RUPs are treated similarly by some certifying authorities, and therefore the proposal would also impact applicators of non-RUPs in these programs. Other commenters asserted that adolescents' developmental status does not differ if they are an employee on a farm owned by an immediate family member or by someone unrelated to them and therefore oppose any exception to the proposed minimum age.

Responses. Based on the comments received and an evaluation of existing literature related to adolescents' development of maturity and judgment, EPA has decided that the benefits of generally prohibiting persons under 18 years old from applying RUPs justify the costs. See the responses in Unit XII. for general discussion of minimum age requirements for all applicators of RUPs, as similar comments were received for the proposed age requirements for certified and noncertified applicators of RUPs.

EPA agrees that improving the competency of noncertified applicators applying RUPs under the direct supervision of a certified applicator strengthens protections for applicators, others and the environment. The final rule includes requirements aimed at enhancing the competency of noncertified applicators beyond the minimum age requirement. See Unit X.

EPA recognizes that DOL prohibits persons under 18 years old from engaging in hazardous tasks in other industries, and that some certifying authorities have taken action to prohibit

certain adolescents from applying RUPs. See Unit XII. for a discussion of EPA's consideration of existing rules related to the minimum age requirement.

EPA disagrees with commenters' request to establish a minimum age lower than 18. While research shows that brains continue to develop until people are in their early to mid-20s, the minimum age to engage in many hazardous activities has been established as 18 years old. In addition, EPA recognizes that adolescents may not feel empowered to question or refuse tasks assigned to them that would put them or others at risk, which is important when using RUPs.

EPA has established in the WPS a minimum age of 18 generally applicable to persons handling agricultural pesticides and for early-entry workers. Persons using RUPs in agriculture would be subject to both the WPS and this certification rule. Noncertified applicators as defined by this rule are also handlers under the WPS when using certain agricultural pesticides. Establishing a consistent minimum age would ensure consistent protections for noncertified applicators working in agriculture and other industries, and would avoid the confusion that could result if noncertified applicators were subject to different minimum age requirements in agriculture versus other industries.

EPA agrees that adolescents' developmental status does not differ if they are employees on a farm owned by an immediate family or by someone unrelated to them, as also discussed in Unit XII. However, EPA recognizes that imposing a minimum age for noncertified applicators applying under the direct supervision of a certified applicator could significantly disrupt some family-owned farms. Given the high social cost of imposing a minimum age of 18 years old on noncertified applicators on family farms, EPA has included in the final rule an exception to this requirement. The exception allows noncertified applicators who are at least 16 years old to use RUPs under the direct supervision of a private applicator who is also an immediate family member. The final rule adds a definition of immediate family that matches the definition included in the revised WPS. However, the exception in this rule is different from the complete exemption from the minimum age requirement in the WPS for handlers and early-entry workers who are for members of the owner's immediate family, because even in the context of the family-owned farm, the heightened risks of RUPs warrant both training and a minimum age of 16. Although under

the WPS, owners and their immediate family members are also exempted from certain provisions of the WPS (e.g., providing pesticide safety training for immediate family members), this certification rule does not include any exemption from or exception to the training requirement for noncertified applicators. In addition, the exception does not apply to certain types of RUP applications that present greater potential for adverse effects: The exception does not apply soil and non-soil fumigations, aerial applications, and use of predator control products (sodium cyanide and sodium fluoroacetate). Noncertified applicators who use RUPs in these application categories must be at least 18 years old.

EPA does not agree with commenters' requests to establish exceptions to the minimum age requirement for noncertified applicators working under the direct supervision of commercial applicators, regardless of whether the supervising commercial applicator is a member of the noncertified applicator's immediate family. Noncertified applicators under the supervision of commercial applicators are more likely to use RUPs at sites where misapplication could cause harm to other people, such as to schools, homes, hospitals, parks, shopping centers and offices. To ensure an adequate level of protection not only for the noncertified applicator, but also for those who live in, work at, or visit areas treated by these noncertified applicators, EPA has chosen to require that all noncertified applicators under the supervision of commercial applicators must be at least 18 years old.

XIV. Recertification

A. Existing Rule and Proposal

The existing rule requires States to ensure applicators maintain a continuing level of competency and ability to apply pesticides safely and properly as part of their certification plans. 40 CFR 171.8(a)(2). The existing rule requires that under certification plans administered by EPA, commercial applicators must be recertified every three years and private applicators must be recertified every four years. 40 CFR 171.11. A policy applicable to Federal agency plans directs Federal agencies to include in their certification plans a requirement for applicators to recertify every three years.

EPA proposed a minimum set of criteria for recertification that certifying authorities would have to meet. Applicators would have to recertify by continuing education or an exam and would have to recertify at least every

three years. The continuing education program would have to be approved by the certifying authority and be designed to ensure the applicator continues to demonstrate the level of competency required for initial certification. In addition, a continuing education program would have to meet certain criteria, including: (1) Applicators would have to earn at least half of the required training in the last 18 months; (2) a CEU would be defined as 50 minutes of active training time; and (3) applicators would have to complete a minimum amount of training based on their certification. Specifically, the proposal would have required commercial applicators to earn at least six CEUs of core training and six CEUs for each category (pest control and application method-specific) of certification. The proposal would have required private applicators to earn at least six CEUs in general private applicator training and three CEUs per application method-specific category of certification.

B. Final Rule

EPA has completely revised the approach for recertification in the final rule in response to comments. Instead of establishing prescriptive minimum requirements for all recertification programs, the final rule establishes several performance standards for recertification programs and describes the information about recertification programs that must be provided in certification plans submitted by certifying authorities. The final rule requires applicators to recertify through continuing education or an exam and to recertify at least every five years. The recertification program established by a certifying authority may rely on continuing education or an exam or both.

The final regulatory text for recertification programs is available at 40 CFR 171.107. The final regulatory text for State plans related to recertification is located at 40 CFR 171.303(b)(4). The final regulatory text for Federal agency plans related to recertification is located at 40 CFR 171.305(b)(3). The final regulatory text for Tribal plans related to recertification is located at 40 CFR 171.307(b).

C. Comments and Responses

Comments—Support Overall Approach or a More Stringent Approach. Several individual commenters generally supported the proposed requirements to increase the amount of training required. One individual supported standardizing the amount of training and another urged

EPA to require training annually instead of every three years. Several worker/handler advocacy organizations urged EPA to make the recertification requirements more stringent by requiring certified applicators to recertify every year and take more training than was proposed. They also suggested that EPA require all pesticide applicators to take a written exam after every recertification training to demonstrate their competency and verify their attendance.

Response—Support Overall Approach or a More Stringent Approach. As explained below, EPA was convinced by the majority of comments that a more flexible approach to recertification is the best path forward. The frequency, content, and quantity of training are factors that the certifying authorities will have to specify in their certification plans, in addition to the frequency, content, and quality of any examinations. EPA disagrees that it is necessary for pesticide applicators to take a written exam after every recertification training. Instead, the final rule requires certifying authorities to ensure that any recertification continuing education course or event includes a process for verifying the applicator's successful completion of that course or event.

Comments—Oppose Overall Approach. There was widespread and strong opposition to the proposed recertification requirements across most commenter categories, including States, university extension programs, applicators, growers, farm bureaus, and the Small Business Administration (SBA) Office of Advocacy. Commenters generally agreed with allowing recertification through continuing education or exams, although most preferred continuing education as more effective in improving applicator competency. However, commenters opposed the other proposed recertification criteria, including a three-year certification period, the minimum number of CEUs for commercial and private applicators, requiring half of the training in the last 18 months of the certification period, and defining the length of a CEU as 50 minutes.

Many commenters argued that States have invested resources in determining appropriate continuing education programs and the commenters largely believe that existing recertification programs are effective. State pesticide regulatory agencies or university extension programs in a few States cited relatively low violation rates to justify the effectiveness of their certification and recertification programs. For

example, there were 4,600 pesticide use inspections conducted in Florida from 2010 to 2015. Of these, 2,701 involved a licensed applicator but only 132 of the inspections identified RUP violations. Of the 132 inspections with RUP violations, there were 290 individual RUP violations listed and 260 of these were "failure to maintain applicator RUP records," so only about 30 of the RUP violations that were identified were something other than recordkeeping deficiencies.

Further, many commenters suggested that the one-size-fits-all proposed approach would require a lot of States to completely revamp their programs without adequate justification and that EPA's proposed approach seemed arbitrary. Many commenters stated that the costs of the proposed recertification criteria to States, university extension programs and applicators were not adequately accounted for in the Economic Analysis of the proposed rule. Some States and a State organization commented that the proposed approach would not facilitate certifying authorities reliance on other jurisdictions' certifications because that is a State-specific decision and is often determined by factors that the certification rule would not address, such as state laws that prohibit such reliance, State-specific differences that make such reliance impractical, and the time needed to coordinate certification standards and records with another State.

A few States supported the proposed certification (and recertification) period of three years because they already follow that approach. However, many other commenters including States, university extension programs, applicators, growers and farm bureaus opposed establishing three years as a maximum certification period, arguing that it would greatly increase the burden on States, university extension programs and applicators without any clear benefit. Approximately half of the States have a four- or five-year certification period. As an example of the potential impact, a certifying authority described the potential impact on its private applicator recertification program, which has a certification period of five years. Instead of spreading recertification training for 21,000 private applicators over five years (an average of 4,200 per year), the university extension program would have to provide training to 7,000 private applicators each year. This would require additional staff to meet the training demand. Some training programs are required to be self-funded through fees charged for the training,

increasing the probability of higher fees for training to support additional staff. One certifying authority stated that it changed the certification period from three years to five years and found that a five-year certification period significantly reduced administrative costs without sacrificing the effectiveness of the program, although no evidence was provided to support this belief.

Many commenters opposed the proposed minimum number of CEUs for a variety of reasons. First, some commenters pointed out that the proposed CEU approach does not account for workshop-type programs, which are not based on CEUs that are used in about 15 States. Some other commenters asked if the category-specific CEU requirements would apply to the federal categories or to the State-defined categories that often reflect a subset of a federal category. Many commenters pointed out that requiring six CEUs per category for commercial applicators could be very burdensome for applicators who hold certifications in multiple categories. For example, one certifying authority commented that its program has a total of 26 categories. More than 7,000 of the certifying authority's 15,000 commercial applicators are certified in four or more categories, and business owners, who must certify in all categories their business covers, often are certified in seven to ten categories. Because there was not a proposed cap on the number of category-specific CEUs, the proposed rule would have required some applicators to obtain 30 to 70 hours of training every three years. Many commenters expressed concern about the burden and effect this could have on applicator businesses and the decisions made by applicators. The Small Business Administration Office of Advocacy's comments included the following points: (1) Obtaining the proposed number of CEUs would impose excessive costs as a result of increased time away from the job, travel expenses to attend trainings, and the training fees; (2) applicators may choose to opt out of recertification classes and retest instead because it would be less burdensome; (3) retesting is a less effective way to provide applicators with the most current knowledge, technology and skills than recertification classes because tests and manuals are updated less frequently than training material; and (4) EPA should encourage States to require recertification by training rather than testing. Other commenters pointed out that there was a lot of overlap in the

training for certain categories, such as the identification of weed pests common to the categories of agricultural pest control—plant, forest pest control, ornamental and turf pest control and right-of-way pest control.

Many commenters stated that the necessary amount of training depends on the category. There are not many changes or new material for some categories, such as wood treatment, seed treatment or some small state-specific categories. This could lead to training becoming repetitive, which is not effective and actually could be negative. Further, many commenters argued that the effectiveness of training depends on a number of factors besides frequency (certification period) and the amount of training, such as the content that is covered, the quality of the training, how training providers are approved and auditing or somehow assessing the delivery of the training. Many of the commenters argued that the quality of the training was the most important factor in how effective the training is for the applicators.

There was more variation in the comments regarding the proposed requirement for commercial applicators to obtain some training on core competencies and some on category-specific content, although no commenter supported the proposed requirement of six CEUs of core content and six CEUs per category. One State farm bureau commented that core (general) training is more important to protecting the consumer, environment and applicator and should reflect the majority of the training hours. A few other commenters, mostly States, suggested that there is value in covering both core and category content but the actual amount of core training should be reduced or should not be mandated. Some other commenters pointed out that a lot of topics covered in training cover both core and category-specific content. They also commented that implementing the proposed approach would be problematic because States would have to identify whether specific training sessions counted for core or a category; tracking these different requirements would be burdensome and would require expensive changes to databases that were not included in the Economic Analysis. Some other commenters, including States and university extension programs, argued that requiring six CEUs of core training is too high, and would lead to repetitive and ineffective training. For example, the Iowa State University extension program combines pertinent core information with category-specific content, which has increased applicator

understanding and retention of topics based on exit surveys. Therefore, this university extension program commented that providing generalized, non-specific core information to applicators rather than concise information tailored to their specific category needs would be a step backward.

Commenters suggested a number of alternative approaches to EPA's proposed requirements for recertification of pesticide applicators. Many commenters urged EPA to withdraw or not finalize the proposed recertification requirements. Comments from the Small Business Administration Office of Advocacy covered two other common recommendations from a variety of commenters and suggested that EPA should reduce the number of required CEUs for private and commercial applicators by consolidating or streamlining the CEU requirements or that EPA should accept the States' requirements for recertification. Most of the States and many other commenters urged EPA to leave decisions about the certification period and the amount of recertification continuing education to the States who are more familiar with the specific applicator, funding and pesticide conditions and can facilitate changes when needed. In a survey of States submitted as part of the comments from a State organization, 33 of the 42 States responding (almost 80%) indicated that they have changed their pesticide regulations (not necessarily certification regulations) in the past five years and 26 have changed their pesticide statutes in that time period. Another suggestion from some States and applicator associations was for EPA to allow an equivalency approach similar to the process used for State pesticide containment programs that could allow States to have a longer certification period, different approaches for continuing education and a different amount of required continuing education.

Response—Oppose Overall Approach. The comments make it clear that State recertification programs have gone many different ways over the past 40 years, which led EPA to conclude that it is too late to set detailed numeric federal standards for recertification to encourage acceptance of other jurisdictions' certifications. In addition, the comments explained that there are many reasons a State may or may not accept certifications from other jurisdictions and EPA acknowledges that recertification programs seem to be a minor factor in that decision. EPA has also been convinced that the effectiveness of recertification training

depends on a number of factors besides the two addressed in the proposed rule—the frequency (certification period) and amount (hours of training per recertification period). Finally, EPA generally agrees with the commenters' assessment that certifying authorities have adopted a wide variety of approaches that would not necessarily fit under EPA's proposed recertification scheme but nevertheless are effective in maintaining applicator competency.

Therefore, EPA has completely revised the approach for recertification in the final rule. Instead of establishing prescriptive minimum requirements for all recertification programs, the final rule establishes several performance standards for recertification programs and describes the information about recertification programs that must be provided in certification plans submitted by certifying authorities. The final rule requires applicators to recertify through continuing education or an exam and to recertify at least every five years. The recertification program established by a certifying authority may rely on continuing education or an exam or both. EPA acknowledges that there are different ways to accomplish the goals of ensuring the continued competency of pesticide applicators. The approach in the final rule provides more flexibility and accommodates the different approaches that States have developed including: Recertifying by exams only; recertifying by continuing education or exams; providing continuing education by workshops or by CEUs; providing continuing education by university extension programs, industry groups or other organizations; dividing the universe of certified applicators into a larger number of more specific categories; and using a wide variety of approaches to establish the amount of continuing education required to maintain certification.

EPA also acknowledges that the Economic Analysis of the proposed rule did not account for the costs of all of the changes certifying authorities and pesticide safety educators would have had to make to comply with the proposed approach. For example, changing from workshop-based continuing education to CEU-based programs would have required about 15 certifying authorities to completely redesign their recertification programs. Also, all certifying authorities would have had to develop or revise systems to track core versus category CEUs and the distribution of CEUs over the first and last 18 months of the certification period. Additionally, certifying authorities with longer certification

periods would have had to provide more continuing education opportunities to accommodate more applicators needing training each year, so more pesticide safety educators would have been needed in States where training is done solely by the university extension program. Finally, the Economic Analysis did not fully account for applicators who are certified in multiple categories, especially in states that have 20 or more categories. The proposed requirement for six CEUs per category would have required more training than EPA's estimate, which assumed that each commercial applicator was certified in two categories. However, EPA does not have to include the costs described in this paragraph associated with the proposed rule in the revised Economic Analysis because the final rule adopts a more flexible, performance standard approach instead of the prescriptive requirements and quantitative standards of the proposed rule.

The final rule requires applicators to recertify either through a written examination that conforms to the certification exam standards or through a continuing education program. A recertifying authority's recertification program may rely on written examinations, continuing education programs or both. This requirement did not change from the proposed rule and was generally supported by commenters. The SBA Office of Advocacy urged EPA to encourage States to require recertification by training rather than by testing because training is a better way to provide updated information to applicators. EPA notes that most States already promote their continuing education program as the primary option for recertification and include exams as an option available to applicators if they cannot obtain the required amount of training.

In the final rule, EPA revised the maximum length of time that an applicator's certification is valid from three years to five years. Nearly all certifying authorities currently require recertification within five years or less, and therefore will not be affected by this change (although they will not be free to lengthen recertification periods beyond five years in the future). This requirement will bring any certifying authorities with longer recertification periods into line with the majority, and should provide a more uniform national level of competency. EPA also revised the regulatory text to clarify that five years is the maximum and that a certifying authority may establish a shorter period for how long an applicator's certification is valid.

The final rule incorporates the proposed requirement that written examinations used for recertification must be designed to evaluate whether the certified applicator demonstrates the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators. EPA has adopted a similar, performance standard approach to continuing education programs as well.

EPA was convinced by comments that the effectiveness of training depends on a number of factors. In the final rule, § 171.107(b)(2)(i) establishes a performance standard for continuing education programs that broadly groups the factors into the quantity, content and quality of continuing education programs, which collectively must be sufficient to ensure the applicator continues to demonstrate the competency required by § 171.103 for commercial applicators or § 171.105 for private applicators. This provides flexibility to accommodate the different approaches taken by States, Tribes and Federal agencies. It also allows each certifying authority to determine how the continuing education is provided—by workshops, a CEU-based program or another method. However, this broad performance standard also makes it difficult to specifically describe what would be “sufficient” quantity, content and quality of continuing education programs. This will ultimately be determined on a case-by-case basis between the certifying authority and EPA during preparation, review and approval of individual certification plans. EPA plans to develop a guidance document after the final rule is published to describe some characteristics and parameters of sufficient quantity, content, and quality based on information provided in the comments and anticipates further dialogue with certifying authorities before the guidance is issued.

The final rule establishes two additional requirements regarding the quality of continuing education programs. First, a certifying authority must approve any continuing education course or event relied upon for applicator recertification as being suitable (on its own or in combination with other recertification program elements) for its purpose in the certifying authority's recertification process. 40 CFR 171.107(b)(ii). Second, a certifying authority must ensure that any continuing education course or event, including an online or other distance education course, that provides continuing education for applicator recertification includes a process to verify the applicator's successful

completion of the course or event. 40 CFR 171.107(b)(iii). This is intended to be flexible and allow a variety of ways to ensure that an applicator successfully completed the course or event. As discussed in Unit IX., this performance standard also requires the continuing education course or event to somehow identify the certified applicator, which is a necessary part of verifying that the applicator successfully completed the course or event.

The final rule also expands the information about recertification that a certifying authority must provide in its certification plan. Specifically, §§ 171.303, 171.305 and 171.307(b) require State, Federal agency and certain Tribal certification plans to contain sufficient documentation that the recertification standards meet or exceed the standards in § 171.107, including:

- A list and detailed description of all the standards for recertification adopted by the certifying authority including the elements described below.
- The certification period, which may not exceed 5 years.
- If recertification relies upon written examination, a description of the certifying authority's process for reviewing, and if necessary, updating the written examination(s) to ensure that the written examination(s) evaluates whether that a certified applicator demonstrates the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators.
- If recertification relies upon continuing education, an explanation of how the quantity, content and quality of the Federal agency's continuing education program ensures that a certified applicator continues to demonstrate the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators, including but not limited to:
 - The amount of continuing education required to maintain certification.
 - The content that is covered by the continuing education program and how the certifying authority ensures that content is covered.
 - The process the certifying authority uses to approve continuing education training courses or events, including information about how the certifying authority ensures that any continuing education courses or events verify the applicator's successful completion of the course or event.
 - How the certifying authority ensures the on-going quality of the continuing education program.

This required information will include several narrative explanations, which is a change from the current manner in which certifying authorities enter their certification plan information into CPARD (*i.e.*, drop-down menus or entering specific information). However, this level of description is necessary for EPA to make a determination of whether the quantity, content and quality of continuing education programs is sufficient to ensure continued competency of applicators.

Comments—Require Half of Training in the last 18 Months. Many commenters, including States, university extension programs, applicators, growers, farm bureaus, farmworker advocacy organizations, other non-governmental organizations and the SBA Office of Advocacy, strongly opposed the proposed requirement to earn at least half of the training credits in the last 18 months of the certification period. In summary, the commenters asserted their belief that this proposed requirement would be unnecessary and unworkable, and would not add benefit.

Many commenters pointed out that applicators are professionals and can retain information for more than 18 months. Other commenters stated that the proposed requirement would not accomplish the goals of spreading training out over the whole certification period because nothing would prevent an applicator from taking all of the training in the last year. Several of the commenters supported a requirement for the training to occur throughout the entire recertification period such as requiring some training annually. A few other commenters suggested that establishing a limit on the maximum number of CEUs that could be earned each year would be a more effective way to spread the training over time. Some other commenters stated that this proposed requirement is not needed because applicators end up taking their training over time based on their schedules and the availability of training.

Many commenters also addressed the burden this proposed requirement would put on certifying authorities, university extension programs and applicators. First, certifying authorities do not have systems in place to track CEUs on 18-month intervals and would need to update their tracking systems to do this. The Michigan Department of Agriculture and Rural Development estimated it would cost at least \$100,000 to update their tracking system, which cost \$250,000 in 2006. Second, applicators would also have to track their progress over time, which would

make the process more difficult and would create an incentive for them to take exams instead of the continuing education. Third, this would create more of a burden for university extension programs and applicators to have the needed training courses available at the required times. Since most training happens in the winter and early spring, there could be limited opportunities for applicators to obtain the necessary training in the last 18 months of their certification period in general and especially if sessions are cancelled due to weather or other conditions. Obtaining the required amount of training in the last half of the certification period could be even more difficult for applicators who have a second job and for those in the military because their availability may be even more limited.

Response—Require Half of Training in the last 18 Months. EPA has been convinced by commenters that it is not necessary to establish a limit in the federal certification rule for when continuing education has to take place. While EPA continues to see value in applicators receiving continuing education on a regular basis, this often happens under current recertification programs because of the design of existing recertification programs or because of the logistics determined by applicator and training availability. In addition, the need for certifying authorities and applicators to track the credits over a subset of the certification period could be burdensome. It is not clear that the proposed requirement to earn at least half of the training credits in the last 18 months of the certification period would provide additional improvements in applicator competency sufficient to justify the associated burdens. Therefore, EPA is not finalizing the proposed requirement that half of the required continuing education must be obtained in last 18 months of the certification period. EPA notes that certifying authorities may choose to establish limits in their own programs, such as establishing a maximum number of CEUs that can be earned in a year, as some States currently do.

Comments—Length of a CEU. A State, a university extension program and an individual supported EPA's proposal to define a CEU to be 50 minutes. Some commenters from a variety of commenter groups opposed the proposed definition of a CEU. The alternative suggestions for defining a CEU from States and a university extension program included 30 minutes, 60 minutes and 60 minutes with a 10 minute tolerance. Grower organizations,

retailer organizations and the SBA Office of Advocacy suggested that the CEU requirement should be based on the subject matter since some might require less than or more than 50 minutes. A few commenters pointed out that the definition of the CEU is only in the preamble of the proposed rule and needs to be added to the regulatory text.

Response—Length of a CEU. EPA is not finalizing the proposed definition of a CEU as 50 minutes. Because of the revised approach to recertification, it is no longer necessary to define a CEU as a specific length of time. This further supports the flexible approach in the final rule to clearly allow continuing education to be provided by workshops, CEUs or another method. A certifying authority has the ability to establish its own definition of a CEU where applicable.

Comments—Impact on Commercial Applicators of Non-RUPs. Commenters including States, pesticide applicator organizations, university extension programs, agricultural retail organizations, grower organizations, a pesticide manufacturer organization, a farm bureau, and an advocacy group expressed concerns regarding the impact that the proposed rule might have on non-RUP applications. Commenters expressed concern that the proposed rule could unintentionally impact applicators of non-RUPs because commercial applicators are treated similarly in some States (*i.e.*, they require all for-hire/commercial applicators to be certified whether they use RUPs, non-RUPs, or both).

While the proposed rule would apply only to the certification of applicators using federal RUPs, many States commented that they would have to update their existing statutes and rules to meet the new requirements and it would be infeasible for them to create and implement an effective two-tiered system by separating requirements for RUP and non-RUP applicators. Many States whose certification programs cover applicators who do not use RUPs noted that the cost and administrative burden that would be imposed on State certification programs and applicators by the proposed requirements might force them to relinquish implementation of the federal program back to EPA. This would result in a State left with a dual compliance standard, one administered and enforced by EPA for federal RUP use, and a second administered and enforced by a State for State RUP and non-RUP use. A university extension program expressed concern that some States might decide to rescind the requirement for commercial applicators to participate in the certification

program even if they only use non-RUPs to reduce the certified applicator population and the burden on applicators.

Pesticide applicator representatives commented that the proposed rule would create many new requirements for all applicators and would negatively impact applicators that occasionally apply RUPs and the vast majority that only apply non-RUPs with little supporting evidence that the existing certification system is not adequate.

Response—Impact on Commercial Applicators of Non-RUPs. While these comments do not specifically mention the proposed recertification requirements, EPA assumes that the proposed recertification requirements are a large part of the cost and burden mentioned in these RUP/non-RUP comments, based on the comments summarized earlier in this section. EPA acknowledges that many certification (and recertification) programs apply to a broader range of applicators than the federal certification rule requires, especially for commercial applicators. It is not clear whether jurisdictions that currently require certification of commercial applicators of non-RUPs will continue to do so, or whether they will choose to modify their approach to certification. In any case, this is a choice for each State and Tribe, based on their own evaluations of the expected costs and benefits.

XV. General Certification Plan Requirements

A. Overview

1. Existing rule and proposal. The existing provisions at 40 CFR 171.7 and 171.8 establish the requirements for the submission, approval and maintenance of State plans. These sections of the rule set the content of State plans and outline the specific regulatory provisions, legal authorities, and components that States must have in order for EPA to approve a State plan. An EPA-approved State plan allows the State to certify and recertify RUP applicators. In order to clarify requirements for content, submission and approval of State plans, raise the minimum standards for State pesticide applicator certification programs, and update the requirements for State plans, EPA proposed to revise the provisions of the rule related to submission, approval, and maintenance of State plans. Since the requirements for Tribal and Federal agency plans reference the standards for State plans, the proposed changes would also have impacted the requirements for Tribal and Federal agency plans.

2. Final rule. The final rule differs from the existing rule primarily in the following areas: Requirements for State plans to conform with the final rule specifically related to the standards for the certification of commercial and private applicators, recertification, and direct supervision of noncertified applicators; additional reporting and accountability requirements; required enforcement authorities; recordkeeping requirements for commercial applicators; recordkeeping requirements for RUP dealers; standards for certification credentials; requirements for States' recognition of certifications issued by other States (known as reciprocal certification); and maintenance, modification, and withdrawals of State plans. As discussed in Unit VII.B., the final rule also includes a provision that allows certifying authorities, at their discretion, to add "limited use" categories for commercial applicators. The specific provisions of the final rule are discussed in more detail below.

B. Modification of Existing Certification Plans To Conform to the Final Rule

1. Proposal. EPA proposed to add provisions to ensure that State plans conform to the proposed standards and requirements proposed in other parts of the rule. The proposed changes included standards for the certification of commercial and private applicators, recertification, and direct supervision of noncertified applicators. EPA proposed to retain the existing provision permitting states to adopt, as they considered appropriate, the federal categories appropriate for their States, add subcategories under the federal categories, and add state-specific categories not reflected by the federal categories. EPA proposed that States would be required to adopt the exam administration and security standards outlined as proposed at 40 CFR 171.103(b)(2), including a requirement for the certifying authority to verify the identity of candidates seeking certification or recertification by requiring candidates to present a government-issued photo identification.

2. Final rule. The final rule adds provisions to ensure that State plans conform to the standards and requirements of the final rule. This includes the standards for the certification of private and commercial applicators, recertification of applicators, and direct supervision of noncertified applicators. States will continue to be permitted to adopt federal categories appropriate for their States, add subcategories under the federal categories, delete federal

categories not needed, and add state-specific categories not reflected by the federal categories.

In general, the changes to this section of the final rule provide States with more flexibility to establish requirements that meet or exceed the standards established by EPA in §§ 171.101 through 171.201 as discussed in previous units of this preamble. For example, the changes to the final rule require States to provide a list and detailed description of the recertification standards demonstrating that the State recertification program meets or exceeds the requirements in § 171.107. In addition, the final rule allows States to implement a mechanism for noncertified applicator qualification that meets or exceeds the requirements at § 171.201.

For standards for direct supervision of noncertified applicators, EPA has adopted a different requirement than proposed. The final rule allows certifying authorities to adopt the standards listed at § 171.201, to prohibit the use of RUPs by anyone other than a certified applicator, or to adopt standards for noncertified applicators that meet or exceed the standards at § 171.201.

For exam administration and security standards, EPA has revised the proposed approach to allow more flexibility for States to adopt different approaches that meet or exceed EPA's standards at § 171.103(a)(2). The final rule allows States to adopt the standards listed at § 171.103(b)(2), or to adopt standards for exam security and administration that meet or exceed the standards at § 171.103(b)(2). The final rule requires the certifying authority to check the age and identification of candidates for initial certification, regardless of whether they certify by written exam or training for private applicators, and for recertification by examination. However, the final rule adopts a more flexible requirement by allowing States to authorize candidates to present a government-issued photo identification or a similarly reliable form of identification authorized by the certifying authority, rather than just a government-issued photo identification as proposed. The final rule requires States to specify in their certification plans whether they authorize any other forms of identification and, if so, how they are comparable to a government-issued photo identification.

The final regulatory text for these requirements is located at 40 CFR 171.303(a) and (b).

3. Comments and Responses

Comments. Commenters raised concerns about the proposal limiting States to adopting the proposed standards for noncertified applicators or prohibiting the use of RUPs by anyone other than a certified applicator. Many certifying authorities commenting on the proposal noted that they implement programs for noncertified applicators that are more stringent than EPA's proposal, but would not be acceptable if the proposal were finalized. Some commenters noted the need for flexibility for certifying authorities to adopt standards for noncertified applicators that meet or exceed EPA's standards and that fit within the certifying authority's certification program.

Response. EPA acknowledges that many certifying authorities may have existing programs for the protection of noncertified applicators that are sufficient to ensure that noncertified applicators under the supervision of certified applicators are competent to use RUPs without causing unreasonable adverse effects. In response to the comments, EPA has added a provision to the final rule adding an option for certifying authorities regarding noncertified applicator programs—allowing the adoption of requirements that meet or exceed EPA's standards in the final rule. EPA will evaluate a certifying authority's program against EPA's noncertified applicator program as part of the State plan review and approval process. See Unit X. for more details.

C. Program Reporting

1. Existing rule and proposal. The existing rule requires States to report annually on information related to the administration of the applicator certification program under the EPA-approved certification plan.

To reflect the proposed changes to applicator certification categories and to ensure EPA receives adequate information to monitor the certifying authority's implementation of its certification plan, EPA proposed to require certifying authorities to report the information below to EPA annually.

- The numbers of new, recertified, and total applicators holding a valid general private certification at the end of the last 12-month reporting period.
- For each application method-specific category specified in 40 CFR 171.105(c), the numbers of new, recertified, and total private applicators holding valid certifications at the end of the last 12-month reporting period.
- The numbers of new, recertified, and total commercial applicators

holding a valid core and at least one category certification at the end of the last 12-month reporting period.

- For each commercial applicator certification category specified in 40 CFR 171.101(a), the numbers of new, recertified, and total commercial applicators holding a valid certification in each of those categories at the end of the last 12-month reporting period.

- For each application method-specific category specified in 40 CFR 171.101(b), the numbers of new, recertified, and total valid certifications for the last 12 month reporting period.

- If a State had established subcategories within any of the commercial categories, the report would have to include the numbers of new, recertified, and total commercial applicators holding valid certifications in each of the subcategories.

- A description of any modifications made to the approved certification plan during the last 12-month reporting period that have not been previously evaluated by EPA.

- A description of any proposed changes to the certification plan that the State anticipates making during the next reporting period that may affect the certification plan.

- The number and description of enforcement actions taken for any violations of Federal or state laws and regulations involving use of RUPs during the last 12-month reporting period.

- A narrative summary describing the misuse incidents or enforcement activities related to use of RUPs during the last 12-month reporting period, including specific information on the pesticide(s) used, circumstances of the incident, nature of the violation, and information on the applicator's certification. This section should include a discussion of potential changes in policy or procedure to prevent future incidents or violations.

2. Final rule. The final rule incorporates the proposed reporting requirements with a few changes. The final rule does not distinguish between "pest control categories" and "application method-specific categories", designating them all formally equivalent categories. The final rule does not include the proposed requirement to report misuse incidents and reduces the proposed reporting on enforcement activities.

The final regulatory text for the program reporting is located at 40 CFR 171.303(c).

3. Comments and Responses

Comments. Many commenters, including certifying authorities,

requested that EPA refrain from finalizing the proposed requirement for a narrative summary of enforcement activities. Commenters cited existing reporting requirements related to pesticide use and applicator certification programs, and noted that the proposed requirement would be duplicative. Some commenters also noted that it would be difficult to separate out RUP incidents from the data currently collected (*i.e.*, identifying whether the product was an RUP). Commenters noted that tracking such detailed narrative information, maintaining the information, and compiling the information to report would be time consuming. Commenters asserted that CPARD is not the proper reporting mechanism for this information, if required; they suggested that it be included in the “5700 form” that States, Tribes, and territories submit to EPA’s Office of Enforcement and Compliance Assistance. Finally, commenters noted that they may discuss major incidents already in their year-end reports to EPA.

Responses. EPA appreciates the concerns raised by the commenters. In light of the burden on certifying agencies to track, maintain, and compile detailed narrative information, as well as the potential for EPA to obtain the information about enforcement activities generally through other existing reporting requirements, EPA has chosen not to include the proposed requirement to provide a narrative summary of misuse incidents or enforcement activities in the final rule.

D. Civil and Criminal Penalty Authority

1. *Existing rule and proposal.* The existing rule is not clear on whether States must have authority to impose both criminal and civil penalties on commercial and private applicators. EPA proposed to revise the rule to expressly require that States have both civil and criminal penalty provisions.

2. *Final rule.* EPA is finalizing the civil and criminal penalty authorities as proposed. The final regulatory requirements for civil and criminal penalty authority is located at 40 CFR 171.303(b)(7)(iii).

3. Comments and Responses

Comments. EPA received comments on this provision from certifying authorities and from certifying authority and pesticide safety educator associations. Almost all commenters suggested that EPA eliminate the proposed requirement for States to have both civil and criminal penalty authority. Commenters generally requested that EPA retain the existing

language “. . . for assessing criminal and/or civil penalties,” rather than the proposed language “. . . for assessing criminal and civil penalties.” Commenters recognized that FIFRA has a requirement for States to have both criminal and civil penalty authority, but requested that EPA retain more lenient language.

Commenters also expressed concerns about the proposal at § 171.303(b)(6)(i), suggesting that the proposal would make recordkeeping violations a criminal matter. (“Provisions for and listing of the acts which would constitute grounds for denying, suspending and revoking certification of applicators. Such grounds must include, at a minimum, misuse of a pesticide and falsification of any records required to be maintained by the certified applicator.”) Commenters noted that without further explanation of what “falsification” means, and at what threshold that action would be considered a criminal act, they had concerns that something as innocent as a typographical error might appear to be intentional falsification, which could result in criminal prosecution.

Responses. FIFRA requires certifying authorities to have both criminal and civil penalty authority. EPA disagrees with commenters’ request to retain the more lenient “and/or” language, and is finalizing the rule’s requirement to mirror what is required by FIFRA.

In response to the comments raising concerns about the language in the proposal at § 171.303(b)(6)(i), EPA notes that this requirement has been in the existing rule since the 1970s. Likewise, falsification of records and reports has been a violation of FIFRA since 1972. 7 U.S.C. 136j(a)(2)(M). Commenters did not raise any instances where a missing or incomplete definition of “falsification” has resulted in a typographical error resulting in criminal prosecution. Enforcement agencies, prosecutors and courts all have considerable experience distinguishing typographical errors from criminal falsification. Therefore, EPA has chosen to retain the existing regulatory language. EPA will work with certifying authorities as needed to provide interpretations of and guidance on regulatory language and provisions.

E. Commercial Applicator Recordkeeping

1. *Existing rule and proposal.* The existing rule mandates that State plans include requirements for certified commercial applicators to maintain for a least two years routine operational records containing information on

kinds, amounts, uses, dates and places of applications of RUPs.

EPA proposed to clarify what records commercial applicators must maintain. EPA proposed recordkeeping requirements substantially similar to the recordkeeping requirements established for private applicators under the Food, Agriculture, Conservation, and Trade Act of 1990, Public Law 101–624, November 28, 1990, 104 Stat 3359, which is administered by USDA. EPA proposed recordkeeping for commercial applicators that included the following:

- The name and address of the person for whom the pesticide was applied.
- The location of the pesticide application.
- The size of the area treated.
- The crop, commodity, stored product, or site to which the pesticide was applied.
- The time and date of the pesticide application.
- The brand or product name of the pesticide applied.
- The EPA registration number of the pesticide applied.
- The total amount of the pesticide applied.
- The name and certification number of the certified applicator that made or supervised the application, and if applicable, the name of any noncertified applicator(s) that made the application under the direct supervision of the certified applicator.

• Records related to the supervision of noncertified applicators working under the direct supervision of a certified applicator described in Unit XI.

2. *Final rule.* EPA has finalized the commercial applicator RUP recordkeeping requirements as proposed, except that EPA has changed the substance of the recordkeeping related to supervision of noncertified applicators. See Unit XI. for a discussion of the final requirement for recordkeeping of noncertified applicator training.

The final regulatory requirements for commercial applicator recordkeeping are located at 40 CFR 171.303(b)(6)(vi).

3. Comments and Responses

Comments. Commenters were generally neutral or supportive toward the proposed recordkeeping requirements. Many certifying authorities noted that they already require commercial applicators to maintain records with at least the same content as EPA’s proposal. One certifying authority opposed adoption of commercial applicator recordkeeping requirements. The commenter asserted that certifying authorities are responsible under State primacy

authority for inspection, violation determinations and enforcement, which includes examination and review of application records to verify label compliance and proper application, and that States currently have recordkeeping requirements in place and are the best judge of what records must be kept.

One commenter raised concern about documenting the area treated, especially for spot treatments.

Responses. EPA has chosen to finalize the approach that adopts a consistent national standard for commercial applicator recordkeeping to ensure that the same minimum information about RUP use is maintained by all RUP applicators.

EPA notes that the requirement to record the area treated can be met by recording the number of acres, or other appropriate measure, to which the pesticide was applied. Other appropriate measures could include an area within which treatments were made with a notation that the entire area was not treated (e.g., "spot treatments within 600 sq. ft. lawn").

F. RUP Dealer Recordkeeping

1. Existing rule and proposal. The existing rule does not have a requirement for dealers of RUPs to maintain records; however, all 50 States currently have recordkeeping requirements for RUP dealers. EPA proposed to require certifying authorities to have provisions requiring RUP retail dealers to keep and maintain at each individual dealership, for a period of at least two years, records of each transaction where an RUP is distributed or sold by that dealership to any person. EPA proposed that records of each such transaction include all of the following information:

- Name and address of the residence or principal place of business of each person to whom the RUP was distributed or sold, or if applicable, the name and address of the residence or principal place of business of each noncertified applicator to whom the RUP was distributed or sold for use by a certified applicator.
- The applicator's unique certification number on the certification document presented to the dealer evidencing the valid certification of the certified applicator authorized to purchase the RUP; the State, Tribe or Federal agency that issued the certification document; the expiration date of the certified applicator's certification; and the categories in which the certified applicator is certified.
- The product name and EPA registration number of the RUP(s)

distributed or sold in the transaction, and the State special local need registration number on the label of the RUP if applicable.

- The quantity of the pesticide(s) distributed or sold in the transaction.
- The date of the transaction.

2. Final rule. EPA has finalized the RUP dealer recordkeeping requirement as proposed with a few minor wording changes. The final regulatory text for the RUP dealer recordkeeping requirement is located at 40 CFR 171.303(b)(7)(vii).

3. Comments and Responses

Comments. Some commenters expressed general support for the proposal. Other commenters questioned the need for a federal requirement for RUP dealer recordkeeping when EPA acknowledged in the proposal that all 50 States already have provisions in place requiring RUP dealers to maintain records.

A few commenters suggested that EPA require RUP dealers to maintain the records for four years instead of two years, citing the requirement in California for RUP dealers to maintain records for four years.

Several commenters opposed RUP dealer recordkeeping on the category of certification. Commenters noted that it would be unreasonable to expect RUP dealers to have knowledge of the labeling for each RUP to be able to tell whether the uses on the labeling were covered by each certification category. Other commenters noted that the proposed requirement to collect and verify the applicator's category of certification would impose substantial burdens on dealers.

Response. EPA disagrees with commenters who suggested that a federal RUP dealer recordkeeping requirement is not necessary. The federal rule sets a minimum standard with which all certifying authorities must comply. Recordkeeping is an important way to verify compliance with the provisions of the rule. In order to ensure that all certifying authorities maintain a requirement for RUP dealers to keep records of sales, and to ensure that all records cover minimum necessary information, EPA has decided to retain the proposed requirement.

EPA disagrees with commenters' request to extend the period the records must be maintained from two years to four years. EPA established a two-year recordkeeping period to correspond with the length of time other records under the certification rule and FIFRA must be kept. Absent justification from stakeholders that a longer period is necessary to ensure compliance with the rule or to improve protection of human

health and the environment, EPA has chosen to retain the proposed timeframe of two years.

EPA acknowledges commenters' concerns that verifying and recording the applicator's category of certification could be burdensome. However, EPA notes that applicator certification only covers use of products covered by the category of certification, and that labeling already requires RUP dealers to verify that the applicator is certified in an appropriate category for use of the RUP he or she is purchasing. EPA's regulations require RUP labeling to state: "For retail sale to and use only by Certified Applicators or persons under their direct supervision and *only for those uses covered by the Certified Applicator's certification.*" (emphasis added) 40 CFR 156.10(j)(2)(i)(B). Therefore, RUP dealers are already responsible for knowing the use patterns of the RUPs they sell and which categories of certification are appropriate. For these reasons, EPA has chosen to retain the proposed requirement for the RUP dealer to record the applicator's category(ies) of certification.

G. Certified Applicator Credentials

1. Existing rule and proposal. The existing rule does not have requirements related to content in the credentials that States must issue to certified applicators.

EPA proposed to require States to issue appropriate credentials or documents verifying certification of applicators, containing all of the following information:

- The full name of the certified applicator.
 - The certification, license, or credential number of the certified applicator.
 - The type of certification (private or commercial).
 - The category(ies), including any application method-specific category(ies) and subcategories of certification, in which the applicator is certified, as applicable.
 - The expiration date of the certification.
 - A statement that the certification is based on a certification issued by another State, Tribe, or Federal agency, if applicable, and the identity of that State, Tribe or Federal agency.
- 2. Final rule.** The final rule includes a requirement for States to "describe the credentials or documents the State certifying authority will issue to each certified applicator verifying certification." The final rule does not include the proposed general requirement for applicator credentials to

contain specific information. The final regulatory text for applicator certification credentials is located at 40 CFR 171.303(a)(8).

3. Comments and Responses

Comments. EPA received comments from certifying authorities, certifying authority associations, pesticide safety educator associations, advocacy organizations, and individuals. Most commenters on this issue did not support EPA's proposal and requested that EPA leave the content of certification credentials to the certifying authority's discretion. Many commenters noted that States have processes in place for issuing licenses, and mandating specific information to be included on a certification credential would disrupt the existing processes without any reason for the change. Several commenters noted that the certifying authority's ability to add additional information to the certification document may be limited (*i.e.*, a broad State regulation or law may govern issuance of all licenses). One certifying authority described its recently implemented an internet-based licensing system under which the certifying authority issues the applicator a credential with the applicator's name, license number, and barcode, as well as information on how to access other certification information (*e.g.*, categories of certification, recertification status) online. This system allows the certifying authority to update the categories of certification within 24 hours of a change (*e.g.*, passing category exam), rather than issuing a new certification credential with the additional category information or issuing a separate credential for each category of certification. This system also allows the certifying authority to document attendance at recertification courses by scanning the barcode on the license document. Given the ease of use, investment in developing and implementing a new system, and lack of identification of problems associated with the absence of a federal standard for applicator credentials, the commenter requested EPA not finalize the proposal for the content of applicator credentials because the credentials issued under the certifying authority's licensing system would not meet the proposed content requirements for applicator credentials.

A few commenters expressed specific opposition to the proposal to add to the credential, if applicable, a statement specifying whether the certification was issued in reliance upon another jurisdiction's certification. Applicators may be certified in several categories, and some but not others may be based

on certifications received from other jurisdictions. Commenters said that distinguishing between the categories of certification issued by the certifying authority and those based on certifications earned in another jurisdiction would impose significant burden on the certifying authority and be difficult to accomplish.

A few certifying authorities noted that they already issue certification credentials with the proposed content. One individual commenting suggested that EPA require the credential to include all of the proposed content, plus the expiration date for each category.

Responses. EPA recognizes that certifying authorities have already developed a variety of requirements for issuing applicator credentials. EPA is convinced by the comments received that the proposal to require applicator certification credentials to include specific content would cause significant additional burden for many certifying authorities, without commensurate additional benefit. EPA has decided to continue with the existing regulatory requirement for certifying authorities to have in place a provision for issuance of the appropriate credentials or documents verifying certification of applicators instead of the proposed approach to specify the information that must be on credentials. EPA notes that this requirement is intended to allow the certifying authority, enforcement personnel, and RUP dealers to verify that the person purchasing or using RUPs has a valid certification and is certified in the appropriate categories for the products being purchased or used.

H. Reliance on Certification by Other Certifying Authorities

1. Existing rule and proposal. The existing rule requires States to provide information in their certification plans a description of any arrangements that a State has made or plans to make relating the acceptance of certified applicators from those States or jurisdictions.

EPA proposed to revise these provisions to allow certification relying on certification by another certifying authority under the following conditions:

- A certifying authority could only rely on current, valid certifications issued under another certifying authority's approved certification plan, and could only rely on a certification issued by a certifying authority that issued its certification based on an independent determination of competency without reliance on any other existing certification or authority. For each category of certification that

would be accepted, the certifying authority must determine that the standards of competency in the other jurisdiction are comparable to the standards of the accepting certifying authority.

- Any certifying authority which chooses to certify applicators based, in whole or in part, on the applicator having been certified by another certifying authority, must implement a mechanism to ensure the certifying authority would immediately terminate an applicator's certification if the applicator's original certification terminates for any reason.

- The certifying authority issuing a certification based, in whole or in part, on the applicator having been certified by another certifying authority would have to issue an appropriate credential or document in accordance with the requirements of this section.

2. Final rule. The final rule adopts the proposal with one substantive changes. EPA is not finalizing the proposed provisions requiring the certifying authority to automatically terminate certifications issued based on the applicator's certification in another jurisdiction immediately upon termination of the original certification. The final regulatory requirements are as follows:

- A certifying authority may only rely on current, valid certifications issued under an approved certification plan.

- The certifying authority has examined the standards of competency in the jurisdiction that originally certified the applicator and has determined that, for each category of certification that will be accepted, they are comparable to its own standards.

- Any certifying authority that chooses to certify applicators based, in whole or in part, on the applicator having been certified by another State, Tribe, or Federal agency, must implement a mechanism that allows the certifying authority to terminate an applicator's certification upon notification that the applicator's original certification terminates because the certificate holder has been convicted under section 14(b) of FIFRA (7 U.S.C. 136l(b) or has been subject to a final order imposing a civil penalty under section 14(a) of FIFRA (7 U.S.C. 136l(a)).

- The certifying authority issuing a certification based, in whole or in part, on the applicator having been certified by another State, Tribe or Federal agency must issue an appropriate credential or document in accordance with the requirements of § 171.303(a)(8).

The final regulatory text for these provisions is located at 40 CFR 171.303(a)(9).

3. Comments and Responses

Comments. EPA received comments on this proposal and the issue of reliance on prior certifications generally from certifying agencies and their associations, pesticide safety educators and their associations, pesticide applicator associations, individuals, and USDA APHIS.

Overall, most commenters did not support EPA's proposal to require certifying authorities that choose to issue reciprocal certification to outline the process they would use in the certification plan and to abide by specific conditions. Commenters asserted that including the proposed requirements in the final rule could result in certifying authorities that currently issue such certifications to discontinue the practice because it would become too time consuming without additional benefit to the certification program. Almost all commenters requested that EPA leave to the discretion of the individual certifying authorities all decisions related to reliance on other jurisdictions' certifications.

Many commenters specifically opposed the proposed provisions requiring that the certifications issued in reliance on another jurisdiction's certification "must terminate immediately if the applicator's original certification terminates for any reason" and requiring that certifying authorities "must implement a mechanism to ensure the State will immediately terminate an applicator's certification if the applicator's original certification terminates for any reason." They noted that implementation of such a provision would be extremely difficult or impossible. Once a certification has been issued, a certifying authority does not generally track whether it was based on a certification issued in another jurisdiction. Further, the jurisdiction in which the applicator earned the original certification is unlikely to track which other jurisdictions used its certification as the basis for certification or notify the other jurisdictions when action is taken against the applicator that could result in termination of the certification. Commenters noted that absent a national certification database that would provide notifications when an applicator's certification status changed, certifying authorities would not be able to track the status of each's applicator original certification. Commenters also pointed out that what caused termination of a certification in one jurisdiction may have no impact on another jurisdiction's certification. One jurisdiction noted that it will award an

initial certification based on certification granted by another certifying authority, but the applicator must satisfy all of the second certifying authority's recertification requirements. This commenter noted that many applicators who receive their initial credential based on certification awarded by another jurisdiction will let the original certification lapse and continue to meet the necessary recertification requirements in the reciprocal State to maintain their certification. Under the proposal, this would require the certifying authority that relied on another jurisdiction's certification to terminate its certification despite the applicator satisfying all necessary recertification requirements within that jurisdiction.

Some commenters generally supported the concept of reciprocal certifications, but not the proposed changes to the rule. These commenters noted that requiring the proposed provisions as part of certification plans would not have an impact on a certifying authority's decision on whether to rely on other jurisdictions' certifications.

A few commenters supported the proposal and suggested that EPA should do more to encourage or require reliance on other jurisdictions' certifications, especially to reduce the burden on the pest management industry. One commenter suggested that EPA should require adjacent States to: Enter into reciprocal agreements, harmonize categories and subcategories, and allow CEUs to transfer between jurisdictions. One commenter suggested that the information and training requirements for core certification lend themselves to standardized materials. This commenter suggested that EPA develop such materials and distribute to certifying authorities. The commenter also suggested that EPA could also provide standard training materials for CEUs and testing materials for pest control and application method-specific categories. Another commenter suggested that EPA require consistency by requiring all certifying authorities to use the same titles for their categories and subcategories.

Some commenters seemed to interpret EPA's proposal as requiring mandatory reliance on other jurisdictions' certifications, and strongly opposed any efforts by EPA to require certifying authorities to engage in issuing reciprocal certifications.

Responses. EPA agrees that each certifying authority should have discretion to rely or not rely on other jurisdictions' certification programs and notes that EPA is not mandating such

reliance in any form. However, EPA notes that the existing rule contains provisions similar to some of the elements EPA proposed; requiring that a certification plan must describe any reliance on other jurisdictions' certifications is not new.

EPA acknowledges commenters' concerns about implementing the proposed provisions requiring automatic termination of a certification. While EPA continues to believe that it would be straightforward to establish a requirement that a reciprocal certification terminates automatically if the applicator's original certification terminates for any reason, EPA has decided not to finalize this requirement. First, there are situations where an applicator's certification may terminate that are not problematic, such as if the applicator allows the certification in the original State lapse because he/she no longer works there but continues to stay certified in the second State by completing that State's recertification requirements. This is a very different scenario than if the applicator's original certification was revoked because of serious pesticide use violations. Second, EPA generally agrees that there would be implementation challenges with the proposed requirement because States may not become aware of the applicator's initial certification terminating without a national applicator certification data base or significant effort by the State. However, EPA has retained the requirement for certifying authorities to have provisions allowing them to terminate reciprocal certifications, which would allow a certifying authority to terminate an applicator's certification if they are notified of the termination and if the termination was for a violation of FIFRA or other acts identified by the certifying authority.

Many comments seemed to misinterpret the proposal and suggested that EPA proposed to mandate reciprocal certification between jurisdictions. EPA did not propose and is not including any mandatory reciprocal certification requirements in the final rule.

I. Certification Plan Maintenance, Modification, and Withdrawal

1. Existing rule and proposal. The existing rule specifies that an EPA-approved certification plan may not be substantially modified without the prior approval of the Administrator. EPA issued guidance in 2006 outlining EPA's interpretation of the types of plan revisions that would constitute substantial modifications and therefore

require additional review and approval by EPA.

EPA proposed to replace the provisions in the existing rule related to maintenance, modification, and withdrawals of State certification plans with a codification of the provisions of the 2006 guidance. The proposed revisions would codify existing interim program policy and guidance issued by EPA in 2006 (Ref. 37).

2. *Final rule.* EPA has finalized the proposal with some changes. The final rule adds a provision for modification and withdrawal of approval of existing certification plans while certifying authorities are developing and implementing certification plans that meet the standards of this final rule. The final regulatory text for modification and withdrawal of approval of State plans is located at 40 CFR 171.309.

3. Comments and Responses

Comments. Several certifying authorities and a certifying authority association submitted comments on the proposal related to substantial modifications. Several commenters noted that the clarified language was an improvement from the existing rule. However, they expressed concern that the wording of the proposed requirement would place a burden on certifying authorities to conduct regular reviews and to inform EPA of any modifications to the certification plan. These commenters recommended that the final rule clearly indicate that certifying authorities would only be required to notify EPA of proposed substantial modifications at the year-end review or pre-award negotiation meeting.

One certifying authority requested that EPA leave the definition of what constitutes a substantial modification to the certifying authorities.

Responses. EPA is finalizing the certification plan modification section mostly as proposed. EPA recognizes that States may be concerned about increased burdens to review and report to EPA but notes that EPA is not requiring regular reviews of approved certification plans. EPA disagrees with commenters' requests to require reporting of substantial changes only at the year review or pre-award negotiation meeting. Given the need to ensure that any significant change to the plan, which is likely to require substantial effort on the part of the certifying authority to implement, would not result in EPA rescinding approval of the certification plan, it is reasonable for EPA to require notification prior to the substantial modification.

EPA disagrees with the commenter who requested that EPA leave the definition of what constitutes a substantial modification to the certifying authorities. By defining substantial modifications in the rule, EPA will reduce burden on certifying authorities and the Agency to determine what qualifies as a substantial modification, requiring prior notification to EPA and additional review.

J. Certified Applicator Lists Available to the Public

1. *Option considered but not proposed.* EPA did not propose a requirement for certifying authorities to make available publically a list of all applicators it has certified, but did ask for comments. Under this alternative, EPA considered whether such a list could be made available electronically (e.g., via the internet, and could be used by the public to identify pest control operators certified to perform the application properly and effectively.

2. *Final rule.* EPA has not added any requirements for certifying authorities to make information about certified applicators available to the public.

3. Comments and Responses

Comments. Most commenters on this option opposed it. Several commenters noted that certifying authorities may have limits on what information can be released publically, especially related to personally identifiable information. One commenter cited the potential for the information to be misused if made available to the public.

Response. EPA has chosen not to add to the rule a requirement to make information about certified applicators available to the public. However, EPA suggests that certifying authorities explore workable options within their jurisdictions to make information about certified applicators available to the public, such as maintaining a Web site to verify that an applicator's certification is valid. EPA's Web site already offers general information to the public about RUPs and restrictions on their use (i.e., for use only by certified applicators or someone under their direct supervision). RUPs have the potential to cause unreasonable adverse effects to the environment and injury to applicators or bystanders if not used by a competent applicator, and are not available for purchase or use by the general public. EPA's Web site also notes that certifying authorities may have more restrictive requirements (e.g., require certification for all "for hire" users of pesticides, not only RUP users). EPA's Web site also provides links to

State certification program coordinators so the public can direct their inquiries to the appropriate agency. EPA intends to work with certifying agencies to develop resources for those seeking to hire certified applicators, such as fact sheets summarizing certification requirements, and a Web site providing links to publically available certified applicator information.

XVI. Establish Provisions for Review and Approval of Federal Agency Plans

A. Existing Rule and Proposal

The existing rule includes a provision for a Government Agency Plan (GAP) certification program that would cover all employees of all Federal agencies using RUPs in the course of their duties. However, the GAP certification process was never developed or implemented by EPA or the Federal government. In 1977, EPA announced a policy that provided an alternative approach for Federal agencies to develop and implement their own plans for the certification of applicators of RUPs (Ref. 46). In the 1977 policy, EPA noted that the standards for Federal agency plans were to be essentially equal to or more stringent than requirements for State plans. Currently, four Federal agencies have EPA-approved Federal agency plans that were approved prior to 1990: Department of Defense (DOD), USDA, Department of Energy (DOE) and the Department of the Interior (DOI).

In order to streamline the rule and codify the existing policy, EPA proposed to add to the rule a provision for review and approval of Federal Agency Plans, eliminate the GAP certification program for federal government employees, and establish new requirements for Federal agency certification plans similar to those proposed for State and Tribal plans. EPA proposed to clarify and expand the requirements for Federal agency plans from the existing policy to include:

- Compliance with all applicable standards for certification, recordkeeping, and other similar requirements for State/Tribal plans.
- Ensure compliance with applicable State pesticide use laws and regulations, including those pertaining to special certification requirements and use reporting when applying pesticides on State lands.
- Compliance with all applicable Executive Orders.
- Specific requirements for annual reporting and certification plan maintenance.

B. Final Rule

The final rule includes the proposed requirements for Federal agency

certification plans with minor revisions and deletes the GAP section. It also includes many of the same changes made to the requirements for State plans to accommodate changes made to the requirements for certification, recertification, and supervision of noncertified applicators. The final regulatory text for these requirements is available at 40 CFR 171.305.

C. Comments and Responses

Comments. EPA received only a few comments regarding this proposal. None of the four Federal agencies that currently have EPA-approved Federal Agency Plans (*i.e.*, DOD, USDA, DOE and DOI) addressed the issue during the comment period.

In general, commenters representing States and grower organizations did not express opposition regarding provisions for Federal agency plans, and supported EPA requiring equivalent program standards and approval processes for certification plans of States and Federal agencies.

A State and an applicator organization representative commented that the current standard under the 1977 policy is adequate and each State should be allowed to continue oversight of applicators operating within each State without having the rules revised, “so that Federal employees are accountable for State requirements.”

Response. EPA notes that if applicators certified under a Federal agency certification plan are using RUPs in States or Indian country, they must follow the applicable laws and regulations of the jurisdiction where the use occurs. Under the final rule, Federal agency employees will be accountable for complying with relevant State requirements.

XVII. Certification Programs in Indian Country

A. Clarifying Options for Certification Programs in Indian Country

1. *Existing requirement and proposal.* The existing rule provides three options for applicator certification programs in Indian country:

- Tribes may utilize State certification to certify applicators, which requires concurrence by the State(s) and should be memorialized in an appropriate State-Tribal agreement;
- Tribes may develop and implement a Tribal certification plan, which requires Tribes to develop and submit an appropriate Tribal certification plan to EPA for approval; or
- EPA may administer a Federal certification plan for applicators in Indian country, such as EPA’s national plan for Indian country (Ref. 3).

EPA proposed to revise the mechanisms for establishing applicator certification programs in Indian country as follows:

- Revise the current option for Tribes relying on State certification by providing for Tribes to utilize State, Tribal, or Federal agency certification; and replacing the provision regarding Tribes entering into cooperative agreements with States, with a requirement for Tribes to enter into agreements with EPA Regional offices. The proposal also eliminated current requirements for States to include in their State certification plans references to any cooperative agreements with Tribes for recognizing the States’ certificates.

- Clarify that EPA can, in consultation with the affected Tribe(s), implement a Federal certification plan in any area of Indian country not covered by an approved certification plan.

- Update the requirements for Tribal plans by providing for submission of Tribal plans directly to the EPA; and requiring those Tribes that choose to manage their own certification plan to conform to the new standards being proposed for State and Federal agency certification plans for initial certification and recertification of private and commercial applicators and the training and supervision of noncertified applicators who apply RUPs under the direct supervision of a certified applicator. However, Tribes would not be required to meet criminal enforcement requirements that would apply to State plans.

2. *Final rule.* EPA is finalizing the options for applicator certification in Indian country as proposed with some changes. The final regulatory text for this requirement is available at 40 CFR 171.307.

3. Comments and Responses

Comments—General

Ten commenters provided comments on the options for establishing a certification program in Indian country (four States, two applicators, one grower association, one private citizen, one Federal agency, and one Tribal organization). In general, the commenters expressed support for the proposed options. However, some comments indicated that additional clarification on the options is needed.

Comments—State notification. One State commenter and one Tribal organization expressed support for EPA’s proposal that Indian Tribes may enter into agreements with EPA to recognize certifications issued under

other EPA-approved or administered certification plans (*e.g.*, State, Tribal, or Federal) instead of entering into agreements with States administering EPA-approved plans. However, both commenters asked how a State would know whether a Tribe had an agreement with EPA to recognize the certification of the State. The State commenter stated that the certifying State must be notified because multiple Indian Tribes, nations, and entities are present in many States, each with their own authorities and programs, making coordination of pesticide regulation challenging. The State commenter suggested that notification to all parties of certification actions taken by any party is also necessary to avoid confusion to the applicator as well as the regulatory entities, and that such notification of certification actions is the only way to ensure that Tribes are aware of cancelled or modified certifications so they can take appropriate action under Tribal authority.

Response—State notification. In both the proposed and final rules, if a Tribe chooses to allow persons holding currently valid certifications issued under one or more specified State, Tribal, or Federal agency certification plans to apply RUPs within the Tribe’s Indian country, the Tribe’s certification plan and/or the Tribal-EPA agreement must identify the State(s), Tribe(s) or Federal agency(ies) upon whose certifications the Tribe relies. These plans and agreements will be made publicly available to interested parties, including States, once approved.

Comments—Requesting clarification of “jurisdiction” in the definition of “Indian country.” Two commenters (one State and one Tribal organization) requested further explanation of “jurisdiction” in EPA’s clarification of the definition of “Indian country.” The State commenter indicated that not all land inside reservations is under Tribal jurisdiction. For example, the commenter stated that non-trust land (also called deeded land or non-Indian fee land) within the boundaries of established reservations in their State is under the primary jurisdiction of the State. The State commenter stated that this distinction of jurisdiction is important because without it, for example, applicators may potentially be unable to continue to use FIFRA Section 18 Emergency Exemptions, 7 U.S.C. 136p, or Section 24(c) Special Local Need Registrations, 7 U.S.C. 136v(c), anywhere within the boundaries of a reservation, resulting in lost resources and revenue on deeded or fee-owned land.

A Tribal organization also asked for further clarification on jurisdiction, indicating that jurisdiction on Tribal fee lands has been an issue for a Tribal member who also has a State applicator's license. The commenter stated that the Tribal member has been prevented from applying pesticides on Tribal fee lands in aquatic situations because the State that issued his license will not cover him under its National Pollutant Discharge Elimination System permit program for discharges from pesticide applications because the fee land is Tribal land (*e.g.*, not trust land), and EPA will not cover his application of pesticides because it claims the land is under the jurisdiction of the State.

In addition to these questions, the Tribal organization also asked for clarification on which entity's RUP list will be adopted under a Tribal-EPA agreement. The commenter stated that the RUP list for a State and EPA will not necessarily be the same, and that it was uncertain which one will control. Complicating the situation is how an RUP will be treated on Tribal trust lands. The commenter stated that the Tribal member identified in the previous paragraph has indicated that a pesticide he uses is not an RUP under the EPA list, but once he is on fee lands of the Tribe, the pesticide is considered an RUP on the State list.

A third commenter recommended that EPA delete the definition of "Indian country," but did not provide a rationale or alternative language for this recommendation.

Response—Requesting clarification of "jurisdiction" in the definition of "Indian Country." Section 171.3 of the proposed and final rule define "Indian country" as follows:

1. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation.

2. All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State.

3. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

This definition is consistent with the definition of Indian country at 18 U.S.C. 1151. Under EPA's longstanding approach, EPA treats as reservations, and thus as Indian country, lands held by the United States in trust for an Indian Tribe even if the Tribal trust land

is located outside the boundaries of a formal Indian reservation. (See, *e.g.*, 56 FR 64876, 64881 (December 12, 1991); 63 FR 7254, 7258 (February 12, 1998)). Under relevant principles of federal Indian law, jurisdiction in Indian country generally lies with the federal government and the relevant Tribe, and not with the States. *Alaska v. Native Vill. of Venetie Tribal Gov't*, 522 U.S. 520, 527 n.1 (1998). State certification plans are, therefore, generally not approved by EPA to operate in Indian country absent an express demonstration of authority by a State—*e.g.*, under a separate federal statute granting the State such authority—and an express approval by EPA of the State plan for such area. Currently, most of Indian country is covered by EPA's existing Federal certification plan for Indian country, and will continue to be covered by that plan unless and until replaced by an EPA-approved plan.

For purposes of implementing the certification plan under FIFRA and EPA's regulations, only products classified as RUPs by EPA trigger certification requirements; non-RUPs can be used by any person and do not require the user to be certified. States must use EPA's list of RUPs, but may classify additional non-RUPs as restricted at the State level. This additional State product restriction would trigger the certification requirements at the State level, but would not necessarily trigger certification requirements in Indian country. Because Indian country includes all lands within the exterior boundaries of an Indian reservation irrespective of who owns the land, an applicable certification plan administered pursuant to a Tribal-EPA agreement (*i.e.*, pursuant to section 171.307(a) of the proposed rule), would generally apply on all land that is located within the exterior boundaries of an Indian reservation. Although proposed section 171.307(a) (like section 171.10(a) of the existing rule) permits Indian Tribes to allow RUP use by applicators holding valid State certifications, the rule would not authorize or approve any State plan or exercise of State jurisdiction in Indian country under FIFRA, whether on fee-owned land or otherwise. For purposes of the certification plan, jurisdiction under this scenario would be exercised by the relevant Tribe and EPA in accordance with the Tribal-EPA agreement. To the extent the Tribal fee land described in the Tribal organization's comment is within the exterior boundaries of an Indian

reservation, it would be reservation land and, thus, Indian country, regardless of the fact that a Tribe or other entity holds a deed of ownership to the land. EPA notes that there may be circumstances where non-reservation lands are entirely surrounded by reservation lands. This may occur, for instance, where an Indian reservation is formed around an area that is never made part of the reservation, where land located within the original exterior boundaries of an Indian reservation loses its reservation status by virtue of an act of Congress, or in other unusual circumstances. To the extent the Tribal fee land described in the comment is non-reservation (and non-Indian country) land, then the State's RUP list would apply as it would in any other non-Indian country area.

Comments—EPA-administered certification plan in Indian country. One Tribal organization stated that they did not support a Federal certification plan that would cover applicators using RUPs in different, non-contiguous parts of Indian country. Instead, the commenter expressed support for the existing EPA plan for the certification of applicators of RUPs within Indian country which provides that "[t]he certification on which the Federal certificate will be based must be from a State or Tribe with a contiguous boundary to the relevant areas of Indian country (Ref. 3)." Additionally, the commenter stated that the existing EPA plan for certification in Indian country indicated that EPA Regional offices have little discretion in allowing Federal certification under the final EPA plan based on valid certifications from nearby States or Tribes not directly contiguous to the Indian country area at issue.

One Federal agency stated that EPA should consider certification under the corresponding State plan to be sufficient in place of the EPA national plan. The commenter believed that this would reduce the burden for applicators, particularly for APHIS Wildlife Services commercial applicators, whose assistance has been requested by the Tribe and who are already certified in that State.

Additionally, two applicators stated that the rules and certification within Indian country should be the same as the rules and regulations governed by the State in which the Indian country exists.

Response—EPA-administered certification plan in Indian country. It is EPA's position that certification plans in Indian country should serve the needs of the relevant Tribe and Indian country community. Tribes are not required to develop their own plans. Where EPA

has not approved a certification plan for an area of Indian country, the Agency is authorized to implement an EPA-administered plan for the Federal certification of applicators of RUPs pursuant to FIFRA sections 11 and 23. 7 U.S.C. 136i, 136u. In any area of Indian country where EPA has not approved a Tribal certification plan and no other EPA-approved or administered plan applies, EPA will implement the 2013 “EPA Plan for the Federal Certification of Applicators of Restricted Use Pesticides within Indian Country” (Ref.3).

The comments regarding an EPA-administered certification plan for Indian country appear to reflect a misunderstanding of what was meant in the proposal. EPA wishes to clarify that the EPA-administered plan would cover applicators in different, non-contiguous parts of Indian country in the sense that it is intended to serve all areas of Indian country throughout the United States where no other certification mechanism exists (*i.e.*, Indian country of those Tribes that do not implement their own certification plan or base their certification on those of another certifying authority, or where no other approved plan is in place). Such a plan is already in place and the options for certification methods established in the 2013 “EPA Plan for the Federal Certification of Applicators of Restricted Use Pesticides within Indian Country” are unaffected by these rule changes (Ref. 3). EPA anticipates that in most cases it will issue certifications to individuals with documentation of certification to apply federally designated RUPs through a Federal plan or through an EPA-approved State or Tribal plan with a contiguous boundary to the relevant area of Indian country. Additionally, an EPA-issued certification will only be valid in those areas of Indian country specified by that certification and will not necessarily be applicable to different, non-contiguous areas of Indian country.

Most areas of Indian country are not covered by an EPA-approved plan, so the EPA-administered plan for the federal certification of applicators of RUPs within Indian country already applies to most of Indian country. Since private and commercial applicators certified by a State have no authority to apply RUPs in Indian country except pursuant to a Tribal plan or the Federal plan, EPA believes any provisions that facilitate these plans will be a benefit to State-certified applicators, rather than a burden. EPA does not believe that the requirements for the EPA-administered plan in the final rule will negatively impact or cause undue burden on

private or commercial applicators because applicators with an approved certification from a certifying authority with a contiguous boundary to the relevant area of Indian country will likely be able to obtain certification under the EPA-administered plan. The changes in the final rule are primarily a clarification of existing requirements and policy, and not the imposition of substantial new requirements or obligations with respect to the EPA-administered plan. As such, applicators seeking certification in areas of Indian country under the EPA-administered plan are already familiar with this process.

B. EPA's Consultation Process With Tribal Governments

Comments. One Tribal organization provided comments on EPA's consultation process during the proposed rulemaking, expressing the view that the Tribal consultation regarding the proposed rule fell short for at least three reasons. First, the commenter stated that EPA failed to indicate to whom the letters of invitation for consultation were sent, such as Tribal leaders, administrators and/or environmental department directors. The commenter stated that this is important information to know in order to determine whether EPA provided Indian Tribes with proper notice about consultation regarding the proposed rule. Second, the commenter stated that EPA failed to provide proof that the Tribal representatives who participated on the Tribal consultation calls were designated by their respective Tribes to consult with EPA. Absent such a designation, the commenter suggested that these representatives were likely participating for informational purposes only. Third, the commenter indicated that the Tribal consultation took place several years ago, long before EPA knew what portions of the Certification of Pesticide Applicators rule it was considering revising, and suggested that EPA should have invited Tribes to participate in additional government-to-government consultation at a time closer to the proposal being issued. The commenter stated that EPA must engage in meaningful government-to-government consultation now to allow for each individual Tribe to consider the proposal in its own way.

Response. As stated in the proposed rule, EPA consulted with Tribal officials during the development of this action via a series of scheduled conference calls with Tribal representatives to inform them about potential regulatory changes, especially areas that could affect Tribes, and to inform EPA's

development of the proposed rule. EPA also informed the commenter about the potential changes to the rule. A summary of EPA's Tribal consultation is provided in the docket for this action (Ref. 30).

During the consultation process, the Agency prepared a letter of invitation (Ref. 47) and a fact sheet (Ref. 48) on the Certification of Pesticide Applicators rule for mailing to federally-recognized Tribal leaders, environmental directors, and pesticide program directors. Approximately one thousand letters and fact sheets were mailed to Tribal leaders in early April 2010, prior to the scheduled consultation calls. An initial call was held with the commenter on April 7, 2010, to inform them of the consultation and provide an overview of the regulatory revisions. The consultation calls were held on April 27 and 29, 2010. Twenty-five Tribal representatives attended one or both calls. Among the nearly 20 different Tribes represented during the calls, EPA was able to document participation from the following Tribes:

- Sac & Fox Tribe of the Mississippi in Iowa (Meskwaki Nation)
- Salt River Pima-Maricopa Indian Community
- Yakama Nation
- Flandreau Santee Sioux Tribe
- Jicarilla Apache Nation
- Gila River Indian Community
- Southern Ute
- Confederated Salish and Kootenai Tribes
- Winnebago Tribe of Nebraska
- Oglala Sioux Tribe

EPA began the consultation process noting that the regulatory process was continuing to move forward and this was the time for Tribes to offer their comments and suggestions prior to proposal, and that there would be further opportunities to comment after the proposed rule was published. The background of the rule was presented, and discussions were held among the participants.

As indicated by the commenter and docketed material, EPA sent the Tribes the letter inviting Tribal leaders to participate in consultations on April 1, 2010, and the consultation meetings occurred April 27 and 29, 2010. EPA acknowledges that this was a short timeframe between receiving the notification and holding the consultation meeting, and that the Agency should continue to strive to improve our consultation protocols to ensure that sufficient time is available for Tribes to participate in consultations. EPA notes that this consultation occurred prior to the

Agency issuing its Tribal consultation policy in May 2011, titled “EPA Policy on Consultation and Coordination with Indian Tribes,” (Ref. 49) and that the Agency’s consultation procedures have continued to improve following finalization of that Policy. In conducting consultation on this regulatory revision, EPA followed the procedures that were in effect at that time. Additionally, EPA believes that the consultation efforts in 2010, which covered both the Worker Protection Standard rulemaking and Certification of Pesticide Applicators rule (Ref. 30), provided adequate materials (e.g., presentation (Ref. 50), fact sheet (Ref. 48), follow-up report (Ref. 30)) for Tribal leaders and representatives to review. The information provided in those materials and the consultation meetings represented proposals that were not substantially different from what EPA eventually published in the proposed rule, which include efforts to revise the rule to streamline opportunities for Tribes to participate in the certification and training program. Given that EPA believes it provided adequate information and materials to the Tribes on the proposed changes, that the rule closely corresponds to the proposals in regard to certification in Indian country, and that EPA did not receive any comments on the proposals from individual Tribes, EPA does not believe that further consultation is needed prior to finalizing the rule.

EPA plans to provide at least two informational sessions for Tribes on the final rule to assist Tribes in understanding the changes to the rule and the resource needs for both implementation and enforcement. One of these informational sessions will be provided to the Tribal organization that provided the comment, while the other session will be an open session for all 567 federally recognized Tribes. These informational sessions will be in addition to the general outreach and implementation and compliance assistance that EPA plans to offer to all stakeholders over the next year.

XVIII. Revise Provisions for EPA-Administered Plans

A. Existing Rule and Proposal

The existing rule establishes requirements for EPA-administered certification of applicators of RUPs in States or areas of Indian country without EPA-approved certification plans in place, including specific standards for certification and recertification of pesticide applicators.

EPA proposed to revise the existing rule to incorporate the proposed

changes to State certification plans related to applicator certification, recertification, and noncertified applicator qualifications, as well as reporting and maintenance requirements. EPA intended the proposed revisions to parallel the proposed revisions to requirements proposed for States, Tribes, and other Federal agencies.

B. Final Rule

EPA is finalizing the requirements for EPA-administered certification plans to parallel State certification plan requirements. The final requirements are substantially similar to the proposal, except where the proposed requirements for State certification plans have changed in the final rule, corresponding changes have been adopted in the EPA-administered plan section. The final regulatory requirements for EPA-administered plans are available at 40 CFR 171.311.

C. Comments and Responses

Comments. One commenter expressed general support for the proposed revisions to this section. Two commenters suggested that EPA-administered plans should fall within the same standards as the State within which the plan is being administered.

Response. EPA notes that by definition, an EPA-administered plan cannot fall within the same standards as the State within which the plan is being administered, because EPA only administers certifications if there is no certification plan in place for the jurisdiction. However, any EPA-administered plan will meet or exceed the standards for State plans in § 171.303 of the final rule.

XIX. Revise Definitions and Restructure 40 CFR Part 171

A. Definitions

1. Existing rule and proposal. The existing rule includes definitions for terms related to the rule, as well as terms defined in FIFRA.

EPA proposed to delete, amend, and add definitions to the rule. EPA proposed to delete terms defined in FIFRA, as well as terms not relevant to the proposed rule. EPA proposed to redefine “agricultural commodity”, “certification”, “compatibility”, “competent”, “dealership”, “non-target organism”, “ornamental”, “practical knowledge”, “principal place of business”, and “toxicity.” EPA proposed to replace five existing terms with new terms: Replace “accident” with “mishap,” replace “calibration of equipment” with “calibration,” replace

“protective equipment” with “personal protective equipment,” replace “uncertified persons” with “noncertified applicator,” and replace “restricted use pesticide dealer” with “restricted use pesticide retail dealer.” EPA proposed to add new terms and definitions: “Application,” “application method,” “application-method specific certification category,” “applicator,” “fumigant” and “fumigation,” “Indian country” and “Indian Tribe,” “use” and “use-specific instructions.”

2. Final rule. The final rule deletes all terms as proposed, except for “Agency” (retained existing definition with minor changes). The final rule adds two terms and definitions: “Applying” and “immediate family.” EPA is not finalizing two proposed terms and definitions: “Application method,” and “application-method specific category.” About half of the proposed definitions are being finalized as proposed while the other half have been revised, as described below. Commenters requested that EPA add the following definitions, but they are not included in the final rule: “Active training time,” “drones,” “immediate,” and “immediately.” Relevant definitions and terms are discussed below in alphabetical order.

The final regulatory text for these definitions is available at 40 CFR 171.3.

3. Active training time. i. Existing rule and proposal. “Active training time” is not defined in the current or proposed rules.

ii. Final rule. The final rule does not include a definition for “active training time.”

iii. Comments and responses.

Comments. One certifying authority requested a definition for the term “active training time,” noting that EPA used the term in discussions of the length of time that constitutes a CEU.

Response. The final rule does not define CEUs or the number of CEUs that an applicator must earn to maintain certification. Therefore, EPA has not included this term in the final rule.

4. Agricultural commodity. i. Existing rule and proposal. EPA proposed to modify the definition of “agricultural commodity” in the existing rule by inserting the phrase “but not limited to,” as follows (emphasis added): “agricultural commodity means any plant, or part thereof, or animal, or animal product, produced by a person (including, *but not limited to*, a farmer, rancher, vineyardist, plant propagator, Christmas tree grower, aquaculturist, floriculturist, orchardists forester, or other comparable persons) primarily for sale, consumption, propagation, or other use by man or animals.”

ii. Final rule. The final rule revises the proposed definition to include fungus and algae. Agricultural commodity means any plant, fungus, or algae, or part thereof, or any animal or animal product, produced by a person (including, but not limited to, farmers, ranchers, vineyardists, plant propagators, Christmas tree growers, aquaculturists, floriculturists, orchardists, foresters, or other comparable persons) primarily for sale, consumption, propagation, or use by man or animals.

iii. Comments and responses.

Comment. One commenter suggested the EPA consider expanding the definition of agricultural commodity to include fungi (e.g., mushrooms) and algae.

Response. In the final rule, EPA is revising the definition of “agricultural commodity” as suggested by the commenter to ensure that mushrooms and algae are included in the scope of the definition.

5. Agency. i. Existing rule and proposal. “Agency” is defined in the existing rule to mean the United States Environmental Protection Agency unless otherwise specified. EPA unintentionally omitted this definition from the proposal.

ii. Final rule. The final rule retains “Agency” and the existing definition of Agency, with some changes to the order of the words.

6. Application and applying. i. Existing rule and proposal. “Application” is not defined in the existing rule. EPA proposed to define “application” to mean “the dispersal of a pesticide on, in, at, or around a target site.”

ii. Final rule. EPA has revised the proposed definition in the final rule to replace “around” with “directed toward.” EPA has also revised the term defined to include both “application” and “applying.” The final definition is “Application and applying mean the dispersal of a pesticide on, in, at, or directed toward a target site.”

iii. Comments and responses.

Comments. Commenters expressed a belief that the inclusion of the word “around” in the definition could be interpreted as allowing pesticide overspray or drift. They explained that a target site is a specific defined area where a pesticide is applied, and that using the word “around” could lead someone to think that it is acceptable if a treatment is “in the ballpark.” Commenters urged EPA to eliminate the word “around” from this definition. One commenter recommended EPA replace the term “around” with “perimeter.”

Response. EPA agrees with commenters that the word “around” in this context could be misconstrued as permitting off-target application. In the final rule, EPA has replaced “around” with “toward,” to shift the focus to the user’s intention to direct the application towards the target site. The revised definition appears sufficient for distinguishing between application and other pesticide-related activities (e.g., mixing, disposal), and should not be interpreted as a statement regarding what applications are lawful. EPA notes that off-target application of an RUP is misuse and a violation of FIFRA.

7. Application method and application method-specific category. i. Existing rule and proposal. “Application method” and “application method-specific category” are not defined in the existing rule. EPA proposed to add these two terms to the rule.

ii. Final rule. EPA is not adding either of these terms to the final rule. EPA has chosen not to distinguish application method-specific categories from other use categories in the final rule, so adding these terms to the rule is not necessary.

8. Applicator and certification. i. Existing rule and proposal. “Applicator” is not defined in the existing rule. EPA proposed to define “Applicator” to mean “any individual using a restricted use pesticide. An applicator may be certified as a commercial or private applicator as defined in FIFRA or may be a noncertified applicator as defined in this part.”

In the existing rule, “certification” means “the recognition by a certifying agency that a person is competent and thus authorized to use or supervise the use of restricted use pesticides. EPA proposed to define “certification” to mean “a certifying authority’s issuance, pursuant to this part, of authorization to a person to use or supervise the use of restricted use pesticides.”

ii. Final rule. The final rule includes “applicator” and “certification” as proposed.

iii. Comments and responses.

Comments. One commenter argued that since almost every State also defines “applicator” and “certification” to include general use pesticides, both definitions in this rule should include non-RUPs. Another commenter supported the definitions as proposed.

Response. EPA acknowledges that many certifying authorities may define “applicator” and “certification” to include non-RUPs. However, FIFRA allows EPA to establish standards for certification only for users of RUPs, not

all pesticides. Therefore, EPA has decided to finalize the definitions as proposed, including only RUPs, not all pesticides.

9. Calibration. i. Existing rule and proposal. In the existing rule, EPA defines “calibration of equipment.” EPA proposed minor changes to the definition, removing the phrase “of equipment” and adding the phrase “if applicable,” to read: “Calibration means measurement of dispersal or output of application equipment and adjustment of such equipment to establish a specific rate of dispersal and, if applicable, droplet or particle size of a pesticide dispersed by the equipment.”

ii. Final rule. The final rule revises the definition of calibration to mean “measurement of dispersal or output of application equipment and adjustment of such equipment to establish a specific rate of dispersal, and, if applicable, droplet or particle size of a pesticide, and/or equalized dispersal pattern.”

iii. Comments and Responses

Comment. One commenter noted that the existing and proposed definitions of calibration do not contain a reference to equalized pattern or product dispersion. The commenter contended that these elements are critical to proper use.

Response. EPA agrees with the commenter and as a result has amended the definition to include “equalized dispersal pattern.”

10. Certified applicator. i. Existing rule and proposal. In the existing rule, “certified applicator” means any individual who is certified to use or supervise the use of any restricted use pesticides covered by his certification. EPA proposed to remove the definition from the rule.

ii. Final rule. The final rule does not include a definition of certified applicator.

11. Certifying authority. i. Existing rule and proposal. “Certifying authority” is not defined in the existing rule. EPA proposed to define “certifying authority” as “the Agency, or a State, Tribal, or Federal agency that issues restricted use pesticide applicator certifications pursuant to a certification plan approved by the Agency under this part.”

ii. Final rule. EPA is finalizing the definition as proposed.

12. Compatibility. i. Existing rule and proposal. The existing rule includes a definition of “compatibility.” EPA proposed to redefine “compatibility” to mean “the extent to which a pesticide can be combined with other chemicals without causing undesirable results.”

ii. Final rule. EPA is finalizing the definition as proposed.

13. *Competent (competency) and practical knowledge.* *i. Existing rule and proposal.* The existing rule defines “competent” and “practical knowledge.” EPA proposed to redefine “competent” to mean “having the practical knowledge, skills, experience, and judgement necessary to perform functions associated with restricted use pesticide application without causing unreasonable adverse effects, where the nature and degree of competency required relate directly to the nature of the activity and the degree of independent responsibility”, and “practical knowledge” to mean “the possession of pertinent facts and comprehension sufficient to properly perform functions associated with the application of restricted use pesticides, including properly responding to reasonable foreseeable problems and situations.”

ii. Final rule. EPA is changing the term from “competent” to “competency” and finalizing the definition as proposed for the term “competent.” In the final rule, EPA is revising the definition of “practical knowledge” by replacing the phrase “application of restricted use pesticides” with “use of restricted use pesticides” to clearly include all of the activities included in the definition of use. In the final rule, “practical knowledge” means “the possession of pertinent facts and comprehension sufficient to properly perform functions associated with the use of restricted use pesticides, including properly responding to reasonable foreseeable problems and situations.”

iii. Comments and Responses

Comments. One commenter supported the proposed definition for “competent.” Another commenter argued that the definitions of “competent” and “practical knowledge” are unsatisfactory because they raise the question of who determines what counts as practical. The commenter suggested that these definitions require clarity and ought to be grounded in the basic tenets of credentialing practice. The commenter recommended replacing the term “competent” with “competencies” defined as “the collective knowledge, skills, and abilities necessary to perform a job.” The commenter recommended replacing “practical knowledge” with “job knowledge,” defined as “an article of information job holders need to know in order to perform the job.” The commenter recommended adding “job skill” defined as “an acquired proficiency needed to perform a job activity;” “job analysis” defined as “the collection and organization of

information about a job in terms of what jobholders do and the qualities they need to possess in order to perform the job-derived from actual jobholders or persons who immediately supervise the work;” and “standard” defined as “a recognized degree of proficiency, as determined by a passing score on a job-related examination.”

Response. EPA appreciates the commenter’s suggestions to align the definitions with basic credentialing tenets, but does not agree with changing the definitions or adding the terms proposed by the commenter. EPA believes the proposed definitions appropriately contextualize basic credentialing tenets within the framework of FIFRA and the certification of RUP applicators. EPA recognizes that there is an element of subjectivity to these definitions, and expects each certifying authority to exercise its sound judgment in determining—within the parameters set by these definitions and subject to EPA’s approval of the certifying authority’s certification plan—what is practical and who is competent to apply RUPs.

14. *Dealership.* *i. Existing rule and proposal.* The current rule defines dealership, and the definition applies only to dealerships in States or in Indian country where EPA administers the certification plan. EPA proposed to redefine “dealership” to mean “any establishment owned or operated by a restricted use pesticide retail dealer where restricted use pesticides are distributed or sold,” and to apply the definition to all situations.

ii. Final rule. EPA is finalizing the definition as proposed.

15. *Drone.* *i. Existing rule and proposal.* The term “drone” is not included or defined in the existing or proposed rules.

ii. Final rule. The final rule does not include or define “drone.”

iii. Comments and Responses

Comment. One commenter argued that EPA should define the term “drone” because the commenter expects that the use of drones, also known as “Unmanned Aerial Vehicles (UAVs)” in agricultural practices, including for aerial application of pesticides, will increase.

Response. EPA is not defining “drone” in this rulemaking, but may consider it for future rulemaking.

16. *Fumigant and Fumigation.* *i. Existing rule and proposal.* The existing rule does not include or define “fumigant” or “fumigation.”

EPA proposed to define “fumigant” to mean “any pesticide product that is a

vapor or gas, or forms a vapor or gas upon application, and whose pesticidal action is achieved through the gaseous or vapor state”, and “fumigation” as “the application of a fumigant”.

ii. Final rule. The final rule revises definition of “fumigant,” to mean “a restricted use pesticide that bears labeling designating it as a fumigant.” The final rule revises the definition of “fumigation” to mean “the use of a fumigant.”

3. Comments and Responses

Comments. EPA received comments on these definitions from two certifying authorities, a pesticide manufacturer, an organization of pesticide manufacturers, a pesticide applicator organization, and a university extension program. One commenter supported the proposed definitions. Other commenters opposed the proposed definitions, and two commenters explained that there were programmatic consequences to the proposed definition. For example, some commenters contended that as written, the definitions of fumigation and fumigant would unnecessarily require applicator certification and excessive training and education for non-RUP, low-risk products and prohibit the use by applicators who are now qualified to use them.

Commenters explained that the proposed definition describes products that have fumigant activity (based on their ability to harm plants via vapor drift) but are not fumigants, such as foggers, pest strips, mothballs, and the herbicides 2,4-D and clomazone. One commenter noted that the vast majority of all pesticides form gasses to one degree or another. One commenter requested that the definition be specific to pesticides that are active gasses. Another commenter contended that the proposed definition does not consider materials like phosphides, which do not form a gas upon application but instead release gas as the product reacts with atmospheric moisture. Another commenter argued that vapor and gas are ill-defined terms that mean different things to different people, even among physical chemists. Furthermore, the commenter contends that a product’s mode of action (*i.e.*, vapor or gas) is irrelevant. Instead, what is relevant is the risk profile of a pesticide classified as an RUP and a fumigant.

Several commenters offered alternative definitions. One commenter suggested changing the definition to “fumigant means a restricted use pesticide in which the target mode of action is achieved by the target product in a gaseous or vapor state or by a reaction to form a gas or vapor.” Another

commenter suggested “any pesticide product that is a vapor or gas, or forms a vapor or gas upon application, and whose pesticidal action is achieved through the gaseous or vapor state.” One commenter explained the importance of including the phrase “whose pesticidal action is through the gaseous state.” This phrase excludes pesticides that vaporize and cause pesticidal action with limited weak movement that does not penetrate commodities or structures in the same way true fumigants do. One commenter argued that EPA could remove the ambiguity of the proposed definition by defining a fumigant as one that is labeled a fumigant. Another noted that because the proposed rule applies only to RUPs, the definition should be “fumigant means a restricted use pesticide whose label classifies the product as a fumigant.”

Response. EPA acknowledges that the proposed definition could be interpreted to exceed the intended scope. In response to the comments, EPA defines fumigant for the purposes of this rule as an RUP whose labeling designates it as a fumigant.

17. Immediate and immediately. i. Existing rule and proposal. The terms are not defined in the existing or proposed rules.

ii. Final rule. The final rule does not define the terms “immediate” and “immediately.”

iii. Comments and Responses

Comments. Some commenters urged EPA to add a definition for the terms “immediate” or “immediately available” as they apply to the availability of a supervisor of a noncertified applicator. One commenter argued that while in practice adequate supervision is going to vary considerably by site, situation, pesticide being used, geography, abilities of the supervisor, and other factors, the commenter expressed a belief that there is a need to not leave the terms completely open ended. Some commenters suggested defining these terms to allow for the supervisor to be able to arrive at the site of application within three hours of communication from the noncertified applicator, or to be physically present at the site of application. One commenter contended that immediate communication should mean that individuals can contact each other and communicate orally such as a two-way radio or cell phone, but should not include text messaging or voicemail.

Response. EPA has chosen not to define “immediate communication” in the final rule to allow it to be interpreted as needed according to the characteristics of the application and

application site. Although some commenters requested a definition, they also explained that there are many variables involved that determine the type of communication, such as the type of application and product applied, geographic locations and distances in remote areas, and the availability of cell phone service. EPA recognizes that some certifying authorities have established definitions for “immediate communication” and expects that those certifying authorities will continue to use their existing definitions, which may include limits on time, distance, and method of communication.

18. Immediate family. i. Existing rule and proposal. The term “immediate family” is not defined in the existing or proposed rules.

ii. Final rule. EPA is adding a definition for “immediate family” to the final rule. This definition is relevant to the exception to the minimum age requirement for noncertified applicators under the direct supervision of private applicators. The final rule defines “immediate family” as it is defined in the revised WPS (40 CFR 170.305). Immediate means familial relationships limited to the spouse, parents, stepparents, foster parents, father-in-law, mother-in-law, children, stepchildren, foster children, sons-in-law, daughters-in-law, grandparents, grandchildren, brothers, sisters, brothers-in-law, sisters-in-law, aunts, uncles, nieces, nephews, and first cousins. “First cousin” means the child of a parent’s sibling, *i.e.*, the child of an aunt or uncle.

iii. Comments and Responses

Comments. Some commenters requested an exception or exemption to the proposed minimum age requirements for family farms. As part of the exception, some commenters recommended defining “immediate family” as defined in the Worker Protection Standard (WPS).

Response. EPA considered commenters’ requests for an exemption or exception to the minimum age requirement and to use the same definition of “immediate family” as defined in the WPS. In the revised WPS, EPA expanded the definition to include grandparents, grandchildren, some in-laws, cousins, aunts, uncles, nieces and nephews to better reflect the actual patterns of family-based farm ownership in the United States (Ref 36, p. 67540). Because the two regulations cover persons using RUPs in agriculture, EPA agrees that the same definition of immediate family should be applied. In the Certification Rule, EPA has finalized the definition of “immediate family” as

the same definition provided in the WPS. See Unit XIII. for a discussion of the exception from the minimum age requirement for a noncertified applicator applying RUPs under the direct supervision of a certified private applicator who is an immediate family member of the noncertified applicator.

19. Indian country. i. Existing rule and proposal. The term “Indian country” is not defined in the existing rule. EPA proposed to define “Indian country” to mean “1. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation. 2. All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State. 3. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.”

ii. Final rule. EPA is adding the term “Indian country” with the definition as proposed.

iii. Comments and responses. See Unit XVII. for a complete discussion of comments and EPA’s consideration of the definition of “Indian country” in conjunction with the options for establishing a certification program in Indian country.

20. Indian Tribe or Tribe. i. Existing rule and proposal. The term “Indian Tribe” is not defined in the existing rule. EPA proposed to define “Indian Tribe” or “Tribe” to mean “any Indian or Alaska Native Tribe, band, nation, pueblo, village, or community included in the list of Tribes published by the Secretary of the Interior pursuant to the Federally Recognized Indian Tribe List Act.”

ii. Final rule. EPA is finalizing the definition as proposed.

iii. Comments and Responses

Comment. One commenter requested that EPA omit the definition of Indian Tribe in the final rule.

Response. EPA disagrees with the commenter’s request to omit the definition. The commenter did not propose a rationale for omitting the definition or alternatives.

21. Mishap. i. Existing rule and proposal. In the existing rule, the term mishap is not defined, but a similar term, “accident,” is defined to mean “an unexpected, undesirable event, caused by the use or presence of a pesticide, that adversely affects man or the environment.” EPA proposed to replace

the term “accident” with “mishap,” defined to mean “an event that may adversely affect man or the environment and that is related to the use or presence of a pesticide, whether the event was unexpected or intentional.”

ii. Final rule. The final rule retains the term “mishap,” but omits “may” from “may adversely affect.” The final definition is “an event that adversely affects man or the environment and that is related to the use or presence of a pesticide, whether the event was unexpected or intentional.”

iii. Comments and Responses

Comments. A number of certifying authorities noted that the definition of “accident” is when an adverse event has occurred, while the proposed definition of “mishap” would include an adverse event *may have* occurred. Instead of using and defining the term “mishap,” the commenters requested that EPA retain the term “accident” as currently defined in 40 CFR 171. Furthermore, one commenter stated that “mishap” appears to be unique to 40 CFR 171. Commenters argued that the new term is unnecessary, could be confused with similar terms already used (e.g., “incident”) and is inconsistent with terminology used for pesticide incidents or events. The commenter urged EPA to remove this term, or to revise it to be consistent with existing definitions in the majority of certifying authorities’ statutes and regulations.

Response. EPA agrees with commenters that the word “may” does not belong in the definition, as the term mishap is intended to encompass events that *do* adversely affect man or the environment, not events that *may* adversely affect them. The term “accident” usually connotes an unintentional event, but “mishap” encompasses both intentional and unintentional events. EPA believes the broader term is appropriate as used in this rule.

22. Non-target organism. i. Existing rule and proposal. In the existing rule, “non-target organism” means “a plant or animal other than the one against which the pesticide is applied.” EPA proposed to redefine “non-target organism” to mean “any plant, animal or other organism other than the target pests that a pesticide is intended to affect.”

ii. Final rule. EPA is finalizing the definition as proposed.

23. Noncertified applicator. i. Existing rule and proposal. In the existing rule, “uncertified applicator” means “any person who is not holding a currently valid certification document indicating

that he is certified under section 11 of FIFRA in the category of the restricted use pesticide made available for use.” EPA proposed to replace uncertified applicator with noncertified applicator, defined as “any person who is not certified in accordance with this part to use or supervise the use of restricted use pesticides in the pertinent jurisdiction, but who is using restricted use pesticides under the direct supervision of a person certified as a commercial or private applicator in accordance with this part.”

ii. Final rule. In the final rule, EPA is deleting “uncertified applicator” and revising the proposed definition of “noncertified applicator” to add the phrase “in the category appropriate to the type of application being conducted.” In the final rule, “noncertified applicator” means “any person who is not certified in accordance with this part to use or supervise the use of restricted use pesticides in the category appropriate to the type of application being conducted in the pertinent jurisdiction, but who is using restricted use pesticides under the direct supervision of a person certified as a commercial or private applicator in accordance with this part.” The change in the definition from the proposal to the final rule was made because a person who is a certified applicator in one category, such as turf and ornamental, would be a noncertified applicator if involved in the application of an RUP in a different category, such as industrial, institutional and structural pesticide control, and therefore would have to work under the supervision of a certified applicator.

24. Ornamental. i. Existing rule and proposal. In the existing rule, “ornamental” means “trees, shrubs, and other plantings in and around habitations generally, but not necessarily located in urban and suburban areas, including residences, parks, streets, retail outlets, industrial and institutional buildings.” EPA proposed to redefine the term “ornamental” to mean “trees, shrubs, flowers, and other plantings intended primarily for aesthetic purposes in and around habitations, buildings, and surrounding grounds, including residences, parks, streets, and commercial, industrial, and institutional buildings.”

ii. Final rule. EPA is finalizing the definition as proposed.

25. Personal protective equipment. i. Existing rule and proposal. In the existing rule, “protective equipment” means “clothing or any other materials or devices that shield against unintended exposure to pesticides.”

EPA proposed to replace “protective equipment” with “personal protective equipment” and define it to mean “devices and apparel that are worn to protect the body from contact with pesticides or pesticide residues, including but not limited to, coveralls, chemical-resistant suits, chemical-resistant gloves, chemical-resistant footwear, respirators, chemical-resistant aprons, chemical-resistant headgear, and protective eyewear.”

ii. Final rule. EPA is finalizing the definition of “personal protective equipment” as proposed.

26. Principal place of business. i. Existing rule and proposal. In the existing rule, “principal place of business” means “the principal location, either residence or office, in the State in which an individual, partnership, or corporation applies pesticides.” This definition only applies to dealers, dealerships and transactions in States or on Indian Reservations where EPA directly administers a pesticide applicator certification program. EPA proposed to redefine “principal place of business” to mean “the principal location, either residence or office, where a person conducts a business of applying restricted use pesticides. A person who applies restricted use pesticides in more than one State or area of Indian country may designate a location within a State or area of Indian country as its principal place of business for that State or area of Indian country.”

ii. Final rule. EPA is finalizing the proposed definition with one revision to replace “business of applying RUPs” with “business that involves the use of RUPs.” The final definition is “Principal place of business means the principal location, either residence or office, where a person conducts a business that involves the use of restricted use pesticides. A person who applies restricted use pesticides in more than one State or area of Indian country may designate a location within a State or area of Indian country as its principal place of business for that State or area of Indian country.”

27. Regulated pest. i. Existing rule and proposal. In the existing rule, “regulated pest” means “a specific organism considered by a State or Federal agency to be a pest requiring regulatory restrictions, regulations, or control procedures in order to protect the host, man and/or his environment.” EPA proposed to revise the definition of “regulated pest” to “a particular species of pest specifically subject to Tribal, State or Federal regulatory restrictions, regulations, or control procedures

intended to protect the hosts, man and/ or the environment.”

ii. Final rule. EPA is finalizing the definition as proposed.

28. Restricted use pesticide. i. Existing rule and proposal. In the existing rule, “restricted use pesticide” is defined as “a pesticide that is classified for restricted use under the provisions of section 3(d)(1)(C) of the Act.” EPA proposed to revise the definition of “restricted use pesticide” to be “a pesticide that is classified for restricted use under the provisions of FIFRA section 3(d).”

ii. Final rule. In the final rule, EPA is revising the definition of “restricted use pesticide” to be more complete. The definition in the final rule is “restricted use pesticide” means “a pesticide that is classified for restricted use under the provisions of section 3(d) of FIFRA and 40 CFR part 152, subpart I.”

29. Restricted use pesticide retail dealer. i. Existing rule and proposal. In the existing rule “restricted use pesticide dealer” means “any person who makes available for use any restricted use pesticide, or who offers to make available for use any such pesticide.” EPA proposed to replace “restricted use pesticide dealer” with “restricted use pesticide retail dealer” and to define it to mean “any person who distributes or sells restricted use pesticides to any person, excluding transactions solely between persons who are pesticide producers, registrants, wholesalers, or retail sellers, acting only in those capacities.”

ii. Final rule. EPA is finalizing the definition as proposed.

iii. Comments and Responses

Comments. A few certifying authorities supported the inclusion of a restricted use pesticide retail dealer definition, and recommended clearer wording, such as “means any person who is engaged in the business of distributing, selling, offering for sale, or holding for sale restricted use pesticides for distribution directly to users.” One certifying authority offered as an alternative definition, “any person who is engaged in the wholesale or retail sale of restricted use pesticides.”

Response. EPA is finalizing the proposed definition. The phrase “distribute or sell” is defined in FIFRA, 7 U.S.C. 136(gg), and includes all of the activities in the first suggested definition as well as others, so it is more clear for the definition to use the language from FIFRA. The final definition correctly excludes certain transactions, which could be included in “wholesale or retail sale” of RUPs.

30. Toxicity. i. Existing rule and proposal. In the existing rule, the term “toxicity” means “the property of a pesticide to cause any adverse physiological effects.” EPA proposed to redefine “toxicity” to mean “the property of a pesticide that refers to the degree to which the pesticide and its related derivative compounds are able to cause an adverse physiological effect on an organism as a result of exposure.”

ii. Final rule. EPA is revising this definition to be “toxicity” means “the property of a pesticide that refers to the degree to which the pesticide, and its degradates and metabolites, are able to cause an adverse physiological effect on an organism.”

31. Under the direct supervision of. i. Existing rule and proposal. In the existing rule at § 171.2(a)(28) EPA defines the term “under the direct supervision of” to mean the act or process whereby the application of a pesticide is made by a competent person acting under the instructions and control of a certified applicator who is responsible for the actions of that person and who is available if and when needed, even though such certified applicator is not physically present at the time and place the pesticide is applied. “Direct supervision” is not defined in the existing or proposed rules.

ii. Final rule. EPA is deleting “under the direct supervision of” and is not codifying a definition of the term “direct supervision” in the final rule.

iii. Comments and Responses

Comments. EPA received comments from two certifying authorities. One commenter requested a definition for “direct supervision” and suggested that the term “under the direct supervision of” be defined to mean “the act or process whereby the application of a pesticide is made by a competent person acting under the instructions and control of a certified applicator who is responsible for the actions of that person and who is available if and when needed, even though such certified applicator is not physically present at the time and place the pesticide is applied.” Another commenter noted that their State definition of direct supervision differs from the federal in that the State requires the physical presence of a certified applicator within line of sight or hearing distance of a non-certified applicator using RUPs in a private application setting or any category pesticide in a commercial application setting.

Response. EPA appreciates the interest from commenters, but EPA’s discretion to interpret “under the direct

supervision of a certified pesticide applicator” is constrained by FIFRA section 2(e)(4), which provides that “unless otherwise prescribed by its labeling, a pesticide shall be considered to be applied under the direct supervision of a certified applicator if it is applied by a competent person acting under the instructions and control of a certified applicator who is available if and when needed, even though such certified applicator is not physically present at the time and place the pesticide is applied.” Because of this statutory definition, it is not necessary to define either term in the final rule.

32. Use. i. Existing rule and proposal. The existing rule does not define “use”. EPA proposed to define “use” as in “to use a pesticide” means any of the following:

(a) Pre-application activities involving mixing and loading the pesticide.

(b) Applying the pesticide, including, but not limited to, supervising the use of a pesticide by a noncertified applicator.

(c) Other pesticide-related activities, including, but not limited to, transporting or storing pesticide containers that have been opened, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other pesticide-containing materials.

ii. Final rule. The final rule differs from the proposed definition in that it omits the proposed pre-application activities except for mixing and loading and adjusts the wording of paragraph (c) to be consistent with the description of “other pesticide-related activities” in the WPS definition of use in 40 CFR 170.305. The final definition is: *Use, as in “to use a pesticide”* means “any of the following:

(a) Pre-application activities involving mixing and loading the pesticide.

(b) Applying the pesticide, including, but not limited to, supervising the use of a pesticide by a noncertified applicator.

(c) Other pesticide-related activities, including, but not limited to, transporting or storing pesticide containers that have been opened, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other pesticide-containing materials.”

iii. Comments and Responses

Comments. Many certifying authorities, organizations of certifying authorities, some applicator organizations, farm bureaus, and university extension programs commented on the definition of “use”. All commenters were opposed to the

proposed definition. Many commenters addressed consequences of the change, while others offered suggestions to change the definition.

Many commenters argued the definition of “use” was too broad and expansive. A few commenters expressed concern that certifying authorities would have to change their definition of “use” in their law, or it could be outside of the scope of their charter. There was some concern on the part of one commenter about the impacts to certifying authorities’ staff time and resources to make such changes since the definition change has far reaching implications involving other elements of a regulatory program. Another commenter asked whether EPA would expand the label instructing “users” on how to perform the listed pre- and post-application activities like arranging for the application and cleaning equipment and whether the definition of “misuse” would be redefined to correspond with the new definition of “use”. Another commenter contended that in some States the definition would apply equally to users of restricted and non-RUPs. As a result, it would be unmanageable to enforce pre- or post-use requirements of non-restricted pesticide use, on individuals who are not required by certifying agencies to be licensed or to maintain records.

A number of commenters argued that the proposed definition of “use” should be limited to activities where an individual has the potential for exposure to pesticides, specifically the actions involved in the application or direct handling (*i.e.*, mixing, loading, dispersing and disposing) of pesticides. One commenter asked that the definition include only individuals involved in the actual application. Some commenters contend that the written definition should specifically exclude all activities that cannot or do not lead to direct exposure to the pesticide product itself, pesticide containers, or pesticide residues.

Many commenters took issue with the inclusion of most pre-application activities in the proposed definition. One commenter contended that including pre-application decisions or activities in the term “use” is not consistent with how this term is used in other parts of FIFRA, especially where “use inconsistent with the label” is perhaps the most frequently-used violation used for enforcement purposes. 7 U.S.C. 136j. Many pesticide applicator organizations, some certifying authorities, university extension programs and farm bureaus, and a couple of certifying authority organizations were strongly opposed to

including “arranging for the application of a pesticide” in the definition. One commenter believes that in States where the “end user” is responsible for the proper use of the pesticide, some of the activities in the proposed definition (*i.e.*, arranging for the application of the pesticide) may not be conducted by the end user and may therefore be unenforceable by the State. Commenters argued that arranging for the application involves individuals who may never come into contact with an RUP, such as truckers, staff at a pest control firm, consultants, sales staff, veterinarian clinical staff, entomologists, arborists, farmers who hire pesticide applicators and homeowners. Generally, such pre-application activities are not referenced on the pesticide product label. Instead, commenters stated that “use” should only refer to activities listed in existing label language under directions for use. Also, it would be difficult to enforce and costly to investigate violations for each instance of a pesticide application.

Some commenters thought post-application activities would also be difficult to comply with and enforce, such as transporting open containers. It is unclear what part of “transportation” is being addressed and the use violation EPA is trying to prevent. As is, the scope of the definition would include anyone who is cleaning equipment, simply storing pesticide containers that have been opened or even washing shovels used in spill cleanup. One commenter opposed the inclusion of post-application activities of transporting opened containers, and disposing of equipment wash water and other materials contaminated with pesticides.

Commenters disliked other parts of the definition of “use.” Specifically, some were against including responsibilities related to providing training, a copy of a label and use-specific instructions to noncertified applicators. They explained that trainers, industry experts, and corporate partners would have to become certified applicators of RUPs. One commenter asserted that only certified applicators could train noncertified applicators if training was part of “use.” One commenter opposed a reference to the WPS in the definition. Another commenter argued that including “disposal of waste water” in the definition of use would require facilities to make modifications and that this requirement was not considered in the EPA’s assessment of financial impact. In addition, one applicator association argued that properly rinsed containers and properly cleaned equipment should not be included within the term “use”

because the contaminants have been removed. One commenter opposed use of the phrase “including, but not limited to” in the proposed definition of “use” because it is open to interpretation by a regulator, trainer and applicator and makes it difficult to comply with and enforce.

Suggestions to change the definition were offered by some certifying authorities and their organization, some university extension programs, and a few worker/handler advocacy organizations. These commenters mostly favored including broad activities directly related to the application or handling of pesticides. Similarly, some commenters argued that the definition of “use” should include activities related to handling open or empty containers, following label directions, disposing of rinsate or leftover pesticides and similar activities, and the direct application of pesticides, and should not include any other handling procedures related to the pesticide. One State suggested their definition of “use” which includes the “loading, transport, storage or handling after manufacturer’s seal is broken . . .” One commenter suggested broadly defining “use” such as “. . . the application of a pesticide in the production of agricultural crops or other purposes by a pesticide applicator.”

Response. In response to commenters’ concerns, EPA revised the final definition of “use” so it is not as broad or far reaching as the proposed definition. The final definition limits the pre-application activities to mixing and loading the pesticide rather than the longer list of activities included in the proposed definition and in the WPS definition. EPA generally agrees with commenters that activities such as arranging for the pesticide application do not have to be done by a certified applicator or a noncertified applicator working under their supervision.

The final definition retains the proposed activities regarding opened containers, cleaning equipment and disposal but changes the heading to “Other pesticide-related activities” and revising the wording to be consistent with the WPS definition. Transporting and storing opened containers, and disposal of pesticides and pesticide containers are all part of the core standards of competency for private, commercial and noncertified applicators as safety measures to avoid or minimize adverse health effects. While not in the competency standards, the activities of cleaning equipment and disposing of equipment wash waters may expose the persons engaging in those activities to pesticides and their residues.

Commenters who are concerned about any possible inconsistencies between the federal and certifying authorities' definition of "use" are reminded that in the context of this rule, "use" is associated with RUPs only. Certifying authorities that currently do not distinguish between RUP and non-RUP applicators may reconsider whether such a distinction is more appropriate in the context of this final rule.

EPA appreciates the suggested changes to phrases used in the proposed definition. However, EPA does not agree that the suggested phrase "after the manufacturer's seal is broken" is substantially different from the phrase in the definition "containers that have been opened". Both can refer to either containers that are open or containers that have been opened and closed by the user, but are no longer in the same condition as at the time of purchase. EPA has chosen to retain the language "containers that have been opened". The definition suggested by another commenter, "the application of a pesticide in the production of agricultural crops or other purposes by a pesticide applicator" is too general and does not encompass mixing, loading or the other-pesticide related activities that present exposure concerns. EPA maintains that the final definition sufficiently and adequately includes the main activities of applicators in the application and handling of pesticides, and their residues and containers that present significant concerns for exposure and risk to users, the public, and the environment.

The final definition of "use" retains the phrase "including but not limited to", because it is neither necessary nor practical to specify every aspect of pesticide use that is addressed—or could in the future be addressed—on pesticide labeling.

33. Use-specific instructions. i. Existing rule and proposal. The existing rule does not define the term "use-specific instructions". EPA proposed to define "use-specific instructions" to mean "the information and requirements specific to a particular pesticide product or work site that are necessary in order for an applicator to use the pesticide in accordance with applicable requirements and without causing unreasonable adverse effects."

ii. Final rule. In the final rule, EPA is revising the definition by replacing "that are necessary in order for an applicator to" with "that a user needs in order to." The definition of "use-specific instructions" is "the information and requirements specific to a particular pesticide product or work

site that a user needs in order to use the pesticide in accordance with applicable requirements and without causing unreasonable adverse effects."

B. Restructuring of 40 CFR Part 171

1. Existing rule and proposal. The existing rule is a single part with no subparts. The first sections (40 CFR 171.1 through 171.6) describe the standards for commercial and private applicators, and the requirements for persons working under the direct supervision of a certified applicator; they also include definitions and a statement of purpose. The second half of the existing rule (40 CFR 171.7 through 171.11) describes the procedures for States, Tribes, Federal agencies, and EPA to administer certification programs. The existing rule has a section titled "Government Agency Plan" describing a certification plan covering the entire Federal government that has not been developed or implemented.

EPA proposed to reorganize the rule into four subparts: "General Provisions"—scope, definitions and effective date, "Certification Requirements for Applicators of Restricted Use Pesticides"—all standards for the certification and recertification of commercial and private applicators, "Supervision of Noncertified Applicators"—all relevant standards for the certified applicator and the noncertified applicator using RUPs under his or her direct supervision, and "Certification Plans"—requirements for States, Tribes and Federal agencies to submit and modify their certification plans, as well as a description of an EPA-administered applicator certification plan.

2. Final rule. EPA is adopting the new structure as proposed.

3. Comment and response. EPA received one comment expressing general support for proposal to restructure the rule. EPA is codifying the proposed restructuring scheme.

XX. Implementation

A. Proposal

EPA proposed to make the final rule effective 60 days after the final rule is published in the **Federal Register**. EPA proposed to require States, Tribes, and Federal agencies administering EPA-approved certification plans to submit amended certification plans to EPA for approval within two years of the effective date of the final rule. EPA proposed to review and respond to all certification plans submitted within 2 years. Therefore, EPA proposed to allow existing certification plans to remain in

effect for up to four years from the effective date of the final rule. After four years, a State, Tribe, Federal agency, and EPA would be permitted to certify applicators of RUPs only if they have an EPA-approved certification plan that meets or exceeds all of the applicable requirements of the final rule. The proposal included a provision allowing existing certification plans to remain in effect until EPA approved the revised certification plan if the certifying authority had submitted the plan to EPA but EPA had not completed its review of the plan within the proposed timeframe.

B. Final Rule

The final rule is effective 60 days after the date the rule is published in the **Federal Register**, March 6, 2017, as proposed. The final rule adjusts the proposed implementation timeframe to provide certifying authorities additional flexibility. Existing certification plans approved by EPA before the effective date of the rule will remain in effect until three years after the effective date of the final rule; if a certifying authority submits an amended certification plan to EPA for approval within three years of the effective date of the final rule, its existing certification plan will remain in effect until EPA has reviewed and responded to the amended certification plan, but no longer than two more years, unless EPA authorizes further extension in its approval of an amended certification plan. In its approval of an amended certification plan, EPA will specify how much longer the existing plan may remain in effect while the certifying authority prepares to implement its amended certification plan. EPA will base each certifying authority's implementation period on the particular circumstances of that jurisdiction, but anticipates that most certifying authorities will be allowed two years from the date of EPA approval to implement the plan.

There are currently two EPA-administered certification plans, the EPA Plan for Federal Certification of Applicators of Restricted Use Pesticides Within Indian Country and the Federal Plan for Certifying Applicators in Navajo Indian Country. EPA intends to revise these plans to conform to the final rule no later than the dates applicable to existing plans in 171.5, and these plans will remain in effect consistent with 171.5.

C. Comments and Responses

Comments. Two certifying authorities supported the proposed timeline. Many other States, certifying authority associations, university extension

programs, Tribes, some applicator associations, a farm bureau and few individuals opposed the proposed schedule and requested more time to submit certification plans, to allow for regulatory changes, and to implement the changes. Commenters contended it would take a tremendous amount of time and resources to make legislative and regulatory changes. According to a survey of certifying authorities by their associations, 34% of all certifying authorities indicated that they would need to revise regulations while 64% would have to revise both laws and regulations. Many certifying authorities explained their process and estimated timelines for making such changes, demonstrating a tremendous variety in timeframes and process among all programs. Some examples of steps in certifying authorities' processes that would make it difficult to revise the certification plan in the proposed timeframe:

- Engage in local legislative initiatives
- Hold public hearings
- Have final statutory and regulatory changes in place before submitting the revised certification plan to EPA
- Engage legislature on statutory revisions, which can require multiple exchanges; some legislatures meet on a biennial schedule so revised statutes take 2 years to enact.

Some commenters were concerned that opening up statutes and regulations would increase the possibility of other changes being introduced. In all, comments demonstrated the complex nature of legislative and regulatory change that would be necessary to implement revised certification plans.

Certifying authorities also commented that EPA's plan to develop and provide training materials and exams to support implementation would not relieve them of the burden and many resources needed to implement changes.

Many certifying authorities and their organizations emphasized that EPA underestimated the amount of resources in staff and time to coordinate and implement legislative and regulatory change.

Commenters requested that EPA articulate in the final rule that during the entire period for certification plan development and submission, and during EPA's review of submitted plans, there will be open and transparent negotiations with the certifying authorities. These commenters asserted that without such a discussion, certifying authorities would have a much harder time convincing the elected officials that the federal rule is warranted. Commenters also requested

that EPA include in the final rule a clear and understandable outline showing the expected process by which the certifying authority and EPA will work toward a mutually acceptable outcome. Commenters also raised questions about the consequences to the certifying authority if EPA cannot accept the revised certification plan.

Responses. EPA recognizes that implementing the final rule will require cooperation with each certifying authority. EPA intends to engage in open and transparent discussions and negotiations with certifying authorities as they develop revised certification plans and during EPA's review of the revised certification plans to ensure the certifying authority has adequate feedback to develop and submit a plan that EPA can approve and that meets the needs of the certifying authority. The submission, review, and negotiation process will involve the certifying authority, appropriate EPA Regional office (for States and Tribes), and EPA's Office of Pesticide Programs. EPA will establish an internal workgroup with participants from EPA headquarters and Regional offices for the review of certification plans that will provide nationally-consistent oversight and guidance, and answer any questions that arise during the process.

EPA recognizes that certifying authorities and pesticide safety education programs will need to devote resources to additional training, manual development, exam development and review, exam administration, and other services that support certification and education of pesticide applicators in conformance with the final rule. EPA will continue to give priority to funding the States and Tribes for these programs through the State and Tribal Assistance Grants program. In addition, EPA is committed to working with the States and Tribes to provide resources and assistance to alleviate burdens as EPA's budget allows, such as by supporting development of training materials and exams that can be adopted in whole or part by States and Tribes for use in certification and training programs. Further, EPA will continue to provide funding to pesticide safety education programs from service fees collected under the Pesticide Registration Improvement Act and subsequent reauthorizations. Under the existing law, EPA must commit at least \$500,000 of the funds collected by EPA related to pesticide registration-related actions to support the pesticide safety education program.

In response to commenters' concerns, EPA has adopted a final rule with options for more flexible time frames.

The final rule lengthens the time for certifying authorities to submit revised plans and allows EPA discretion to grant certifying authorities more or less than two years to implement newly approved plans. Certifying authorities will have three years to revise and submit their certification plans.

The final rule adds a provision to grant conditional approval of certification plans. Certifying authorities unable to complete necessary legislative and regulatory changes before submitting their new certification plan would be allowed to submit a draft plan conditioned upon those changes becoming effective. EPA expects certifying authorities to submit a written request for conditional approval with a justification and anticipated time frame. EPA will grant conditional approvals to certifying authorities in writing.

When EPA approves a plan, conditionally or unconditionally, it will establish and implementation schedule specific to that approved plan. EPA anticipates that most certifying authorities will be allowed two years from the date of EPA approval to implement the plan, but may set shorter or longer implementation periods as circumstances warrant. EPA will develop a process for certifying authorities to follow when submitting a draft or final certification plan and notifying EPA of final implementation.

In response to commenters' questions about the status of a certification program if EPA does not approve the revised certification plan, EPA emphasizes that it plans to work jointly with each certifying authority to develop a workable certification plan that can be implemented in the jurisdiction and that meets EPA's standards. Decisions on certification plans will be made on a case-by-case basis. The process for EPA administering a certification plan is outlined in 40 CFR 171.311.

XXI. References

The following is a listing of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

1. EPA. Economic Analysis of Final Revisions to the Applicator Certification Regulation. 2016.

2. EPA. Response to Comment on the Proposed Changes to the Certification of Pesticide Applicators Rule. 2016.
3. EPA. Final EPA Plan for the Federal Certification of Applicators of Restricted Use Pesticides Within Indian Country; Notice of Implementation. Notice. **Federal Register** (79 FR 7185, February 6, 2014) (FRL-9904-18).
4. EPA. Federal Plan for Certification of Restricted Use Pesticide Applicators in Navajo Indian Country; Notice of Implementation; and Announcement of Availability of Form to Request Pesticide Applicator Certification in Navajo Indian Country. Notice. **Federal Register** (72 FR 32648, June 13, 2007) (FRL-8078-9).
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18. EPA. Certification Plan and Reporting Database. <http://cpard.wsu.edu/reports/menu.aspx>.
19. EPA. Certification of Pesticide Applicators. 40 CFR part 171. **Federal Register** (39 FR 36446, October 9, 1974) (FRL-269.1).
20. EPA. Submission and Approval of State Plans for Certification of Commercial and Private Applicators of Restricted Use Pesticides. **Federal Register** (40 FR 11698, March 12, 1975) (FRL-340.6).
21. EPA. Federal Certification of Pesticide Applicators in States or Indian Reservations Where There is No Approved State or Tribal Certification Plan in Effect. Final Rule. **Federal Register** (43 FR 24834, June 8, 1978) (FRL-881-7).
22. EPA. Certification of Pesticide Applicators; Expansion of Recertification Time Period. Final Rule. **Federal Register** (48 FR 29854, June 29, 1983) (FRL-2338-8).
23. EPA. Certification of Pesticide Applicators; Recordkeeping and Reporting Requirements. Final Rule. **Federal Register** (48 FR 53972, November 29, 1983) (FRL-2402-7).
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XXII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <http://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review; and, Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action and was therefore submitted to the Office of Management and Budget (OMB) for review under Executive Order 12866 (58 FR 51735, October 4, 1993) and Executive Order 13563 (76 FR 3821, January 21, 2011). A changes made in response to OMB recommendations received during that review have been documented in the docket. In addition, EPA prepared an Economic Analysis of the potential costs and benefits associated with this action, which is available in the docket and summarized in Unit II.C. (Ref. 1).

B. Paperwork Reduction Act (PRA)

The information collection activities in this rule have been submitted to OMB for approval under the PRA, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document that EPA prepared has been assigned EPA ICR No. 2499.02 and OMB Control No. 2070–0196 (Ref. 51). You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

The information collection activities related to the existing certification rule are already approved by OMB in an ICR titled “Certification of Pesticide Applicators” (EPA ICR No. 0155.10; OMB Control No. 2070–0029). Therefore, EPA ICR number 2499.02 only addresses the changes to the existing certification rule. These include:

- Updating the information States, Tribes, and Federal agencies report to EPA.
- Updating the process and requirements for modifying a certification plan.
- Updating certifying authorities’ databases to track the certification of applicators.
- Adding a provision for States to require recordkeeping by RUP dealers.
- Adding specific requirements for noncertified applicator training.
- Adding a provision for commercial applicators to keep records of noncertified applicator training.

Respondents/affected entities: Certified applicators; private and commercial. The number of applicators is based on the Certification Plan and Reporting Database for the years 2009 to 2014 (CPARD, 2015), there are 420,999 commercial applicators and 482,925 private applicators.

Noncertified applicators under the direct supervision of certified applicators. It is estimated that there are 918,892 noncertified applicators who apply RUPs under the direct supervision of commercial certified applicators, and there are 28,092 noncertified applicators who apply RUPs under the direct supervision of private certified applicators.

RUP dealers. EPA estimates that there are approximately 10,000 retail dealers. According to the Agricultural Retailers Association, there are approximately 9,000 agricultural retailers in the United States. Not all are licensed to sell RUPs. EPA estimates that there are far fewer nonagricultural pesticide retailers licensed to sell RUPs, given that more RUPs are registered for agricultural use than for other uses.

Authorized agencies. Authorized agencies, termed certifying authorities in the final rule, are the entities that are authorized by EPA to administer applicator certification plans under 40 CFR part 171. Authorized agencies includes States, territories, federally recognized Tribes and Federal agencies authorized to operate certification programs. Authorized agencies administer certification plans in 50 States, the District of Columbia, and 6 territories (Puerto Rico, U.S. Virgin Islands, American Samoa, Guam, Commonwealth of Northern Mariana Islands, and the Republic of Palau). In addition, there are four approved Tribal certification plans and five approved Federal agency certification plans. The Federal agencies administering certification plans are DOD, DOE, USDA APHIS PPQ, USDA Forest Service (the two USDA plans are separate plans), and DOI (the DOI plan covers three agencies within DOI BLM, BIA and NPS, but no others). EPA administers two certification plans, but is not included as a respondent because the burden to EPA is estimated separately. Wage rates vary according to the entity.

Respondent’s obligation to respond: Mandatory (7 U.S.C. 136–136y, particularly sections 136a(d), 136i, and 136w).

Estimated number of respondents: 1,860,974.

Frequency of response: Rule familiarization is expected to occur annually for the first 3 years. Revising and submitting certification plans will occur one time. Training of noncertified applicators will occur annually. Recordkeeping of RUP sales will occur each time an RUP is sold, which EPA estimates will be 195 times per year per RUP dealer.

Total estimated burden: 2,280,849 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: \$68,573,790 (per year), which includes \$0 annualized capital or operation and maintenance costs.

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 the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

C. Regulatory Flexibility Act (RFA)

Pursuant to section 605(b) of the RFA, 5 U.S.C. 601 *et seq.*, I certify that promulgation of the requirements contained in this final rule will not have a significant economic impact on a substantial number of small entities. There are two types of small entities subject to the requirements of this action: Small farms with private applicators and noncertified applicators using RUPs under their direct supervision, and small firms employing commercial applicators and noncertified applicators using RUPs under their direct supervision. EPA estimates that up to 820,000 small farms use pesticides and may be affected by the rule, although not all will use RUPs. EPA further estimates that at least 167,000 small firms employing commercial applicators may be affected by the rule. The Agency has determined that for private applicators, the average impact of the rule is about \$25 per year and represents less than 1% of annual sales revenue for the average small farm and even to small-small farms with sales of less than \$10,000. Costs to small firms employing commercial applicators are estimated to average less than \$100 per year, which is less than 1% of average annual revenue for these firms.

Impacts to the smallest farms, especially in high-impact States such as Alaska, Kentucky, and Rhode Island, where costs could be around \$100 per year, could exceed 1% of annual sales revenue. However, the number of farms facing such impacts is small relative to the number of small farms affected by the rule. EPA estimates that around 13,000 farms may face impacts of one percent or more of annual revenue. These farms comprise less than one percent of all 1.5 million small farms and less than two percent of all 820,000

small farms that use pesticides that may be affected by the rule. For small firms employing commercial applicators, average impacts of the rule represent less than 0.1% of annual revenue for the average small firm. Even for the high cost scenarios, where costs might be as high as \$474 per year, the impacts are expected to be 0.3% or less of annual revenues. Details of this analysis are presented in the Economic Analysis (Ref. 1).

Although not required by the RFA to convene a Small Business Advocacy Review (SBAR) Panel because the EPA has determined that this action would not have a significant economic impact on a substantial number of small entities, the EPA originally convened a panel to obtain advice and recommendations from small entity representatives potentially subject to this rule's requirements. A copy of the SBAR Panel Report (Ref. 29) is included in the docket for this rulemaking.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531 through 1538, and does not significantly or uniquely affect small governments. As such, the requirements of sections 202, 203, 204, or 205 of UMRA do not apply to this action.

E. Executive Order 13132: Federalism

This action does not have federalism implications, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). 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.

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

This action does not have Tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). This action requires Tribes that certify applicators to perform RUP applications in Indian country to comply with the revised regulation. EPA currently directly administers a national certification plan for Indian country (Ref. 3) and has implemented a specific certification plan for the Navajo Nation (Ref. 4). This rule provides Tribes with the option to develop and administer their own applicator certification programs, to participate in the EPA-administered applicator certification program for Indian country, or to enter into an agreement with EPA regarding

administration of an applicator certification program. As explained in Unit XVII., EPA does not believe the revisions would place any unreasonable burden on Tribes because the rule does not require Tribes to implement certification programs. There are currently only four Tribes with EPA-approved certification plans. The rule requires existing Tribal certification plans to be revised and resubmitted to EPA for review and approval. EPA estimates the costs to these Tribes would be similar to the costs to States for updating and submitting to EPA for approval a revised certification plan, and that they would not result in a significant impact on Tribal entities or programs. Thus, Executive Order 13175 does not apply to this action.

Consistent with EPA's Policy on Consultation and Coordination with Indian Tribes, EPA consulted with Tribal officials during the development of this action. A summary of that consultation is provided in the docket for this action (Ref. 30).

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

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not an economically significant regulatory action as defined by Executive Order 12866. Information on EPA's consideration of the risks to children in development of this action can be found in Unit III.C.3. and in the Economic Analysis for this action (Ref. 1). EPA nevertheless believes that the environmental health or safety risks addressed in this rule could have a disproportionate effect on children.

The primary risk to children that is within the scope of this rulemaking is exposure to RUPs during their work as applicators of RUPs. The rule is intended to minimize these exposures and risks. By establishing a minimum age for persons to become a certified applicator or to use RUPs as a noncertified applicator under the direct supervision of a certified applicator, children would receive less exposure to pesticides that may lead to chronic or acute pesticide-related illness. In addition, the final rule expands training for noncertified applicators to include topics that should also assist in reducing potential risks to children from incidental pesticide exposure, such as avoiding bringing pesticide residues home on clothing.

Like DOL's regulations that implement the FLSA, the rule regulates the ages at which children can apply pesticides. The final rule establishes a minimum age of 18 for persons to

become certified to apply RUPs and to apply RUPs as noncertified persons under the direct supervision of certified applicators, except that a noncertified person using agricultural RUPs under the direct supervision of a private applicator who is also a member of the noncertified applicator's immediate family must be 16 years old. Since many RUPs present heightened risks to harm human health relative to other pesticides, EPA feels that they warrant additional risk mitigation measures beyond those applicable to non-RUPs. EPA expects that the establishment of minimum ages will mitigate or eliminate many risks faced by young applicators of RUPs.

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

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

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards that would require Agency consideration under NTTAA section 12(d), 15 U.S.C. 272 note.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

This action is not expected to have disproportionately high and adverse human health or environmental effects on minority or low-income populations, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). This action will increase 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.

K. Congressional Review Act (CRA)

This action is subject to the CRA (5 U.S.C. 801 *et seq.*), and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 171

Environmental protection, Applicator competency, Agricultural worker safety, Certified applicator, Pesticide safety training, Pesticide worker safety,

Pesticides and pests, Restricted use pesticides.

Dated: December 12, 2016.

Gina McCarthy,
Administrator.

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

PART 171—[AMENDED]

■ 1. The authority citation for part 171 continues to read as follows:

Authority: 7 U.S.C. 136–136y.

■ 2. Add a new heading for subpart A to read as follows:

Subpart A—General Provisions

■ 3. Revise § 171.1 to read as follows:

§ 171.1 Scope.

(a) This part establishes Federal standards for the certification and recertification of applicators of restricted use pesticides, and requirements for pesticide applicator certification plans administered by State, Tribal, and Federal agencies. The standards address the requirements for certification and recertification of applicators using restricted use pesticides, requirements for certified applicators supervising the use of restricted use pesticides by noncertified applicators, and requirements for noncertified persons using restricted use pesticides under the direct supervision of a certified applicator.

(b) A person is a certified applicator for purposes of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), 7 U.S.C. 136 *et seq.*, only if the person holds a certification issued pursuant to a plan approved in accordance with this part and currently valid in the pertinent jurisdiction. As provided in FIFRA section 12(a)(2)(F), it is unlawful for any person to make available for use or to use any pesticide classified for restricted use other than in accordance with the requirements of this part.

§ 171.2 [Reserved]

■ 4. Remove § 171.2.

■ 5. Revise § 171.3 to read as follows:

§ 171.3 Definitions.

Terms used in this part have the same meanings they have in FIFRA and 40 CFR part 152. In addition, the following terms have the meaning specified in this section when used in this part:

Agricultural commodity means any plant, fungus, or algae, or part thereof, or any animal or animal product, produced by a person (including, but not limited to, farmers, ranchers, vineyardists, plant propagators, Christmas tree growers, aquaculturists,

floriculturists, orchardists, foresters, or other comparable persons) primarily for sale, consumption, propagation, or other use by man or animals.

Agency means the U.S. Environmental Protection Agency (EPA), unless otherwise specified.

Application and *applying* means the dispersal of a pesticide on, in, at, or directed toward a target site.

Applicator means any individual using a restricted use pesticide. An applicator may be certified as a commercial or private applicator as defined in FIFRA or may be a noncertified applicator as defined in this part.

Calibration means measurement of dispersal or output of application equipment and adjustment of such equipment to establish a specific rate of dispersal and, if applicable, droplet or particle size of a pesticide, and/or equalized dispersal pattern.

Certification means a certifying authority's issuance, pursuant to this part, of authorization to a person to use or supervise the use of restricted use pesticides.

Certifying authority means the Agency, or a State, Tribal, or Federal agency that issues restricted use pesticide applicator certifications pursuant to a certification plan approved by the Agency under this part.

Compatibility means the extent to which a pesticide can be combined with other chemicals without causing undesirable results.

Competency means having the practical knowledge, skills, experience, and judgment necessary to perform functions associated with restricted use pesticide application without causing unreasonable adverse effects, where the nature and degree of competency required relate directly to the nature of the activity and the degree of independent responsibility.

Dealership means any establishment owned or operated by a restricted use pesticide retail dealer where restricted use pesticides are distributed or sold.

Fumigant means a restricted use pesticide that bears labeling designating it as a fumigant.

Fumigation means the use of a fumigant.

Immediate family means familial relationships limited to the spouse, parents, stepparents, foster parents, father-in-law, mother-in-law, children, stepchildren, foster children, sons-in-law, daughters-in-law, grandparents, grandchildren, brothers, sisters, brothers-in-law, sisters-in-law, aunts, uncles, nieces, nephews, and first cousins. "First cousin" means the child

of a parent's sibling, *i.e.*, the child of an aunt or uncle.

Indian country means:

(1) All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation.

(2) All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State.

(3) All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

Indian Tribe or *Tribe* means any Indian or Alaska Native Tribe, band, nation, pueblo, village, or community included in the list of Tribes published by the Secretary of the Interior pursuant to the Federally Recognized Indian Tribe List Act.

Mishap means an event that adversely affects man or the environment and that is related to the use or presence of a pesticide, whether the event was unexpected or intentional.

Nontarget organism means any plant, animal or other organism other than the target pests that a pesticide is intended to affect.

Noncertified applicator means any person who is not certified in accordance with this part to use or supervise the use of restricted use pesticides in the category appropriate to the type of application being conducted in the pertinent jurisdiction, but who is using restricted use pesticides under the direct supervision of a person certified as a commercial or private applicator in accordance with this part.

Ornamental means trees, shrubs, flowers, and other plantings intended primarily for aesthetic purposes in and around habitations, buildings and surrounding grounds, including residences, parks, streets, and commercial, industrial, and institutional buildings.

Personal protective equipment means devices and apparel that are worn to protect the body from contact with pesticides or pesticide residues, including, but not limited to, coveralls, chemical-resistant suits, chemical-resistant gloves, chemical-resistant footwear, respirators, chemical-resistant aprons, chemical-resistant headgear, and protective eyewear.

Practical knowledge means the possession of pertinent facts and comprehension sufficient to properly perform functions associated with use of

restricted use pesticides, including properly responding to reasonably foreseeable problems and situations.

Principal place of business means the principal location, either residence or office, where a person conducts a business that involves the use of restricted use pesticides. A person who applies restricted use pesticides in more than one State or area of Indian country may designate a location within a State or area of Indian country as its principal place of business for that State or area of Indian country.

Regulated pest means a particular species of pest specifically subject to Tribal, State or Federal regulatory restrictions, regulations, or control procedures intended to protect the hosts, man and/or the environment.

Restricted use pesticide means a pesticide that is classified for restricted use under the provisions of section 3(d) of FIFRA and 40 CFR part 152, subpart I.

Restricted use pesticide retail dealer means any person who distributes or sells restricted use pesticides to any person, excluding transactions solely between persons who are pesticide producers, registrants, wholesalers, or retail sellers, acting only in those capacities.

Toxicity means the property of a pesticide that refers to the degree to which the pesticide, and its degradates and metabolites, are able to cause an adverse physiological effect on an organism.

Use, as in "to use a pesticide" means any of the following:

(1) Pre-application activities involving mixing and loading the pesticide.

(2) Applying the pesticide, including, but not limited to, supervising the use of a pesticide by a noncertified applicator.

(3) Other pesticide-related activities, including, but not limited to, transporting or storing pesticide containers that have been opened, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other pesticide-containing materials.

Use-specific instructions means the information and requirements specific to a particular pesticide product or work site that an applicator needs in order to use the pesticide in accordance with applicable requirements and without causing unreasonable adverse effects.

§ 171.4 [Removed]

■ 6. Remove § 171.4.

■ 7. Revise § 171.5 to read as follows:

§ 171.5 Effective date.

(a) This part is effective March 6, 2017. Certification plans approved by

EPA before the effective date remain approved except as provided in §§ 171.5(b)-(d) and 171.309.

(b) *Status of certification plans approved before effective date.* A certification plan approved by EPA before March 6, 2017 remains approved until March 4, 2020, except as provided in paragraph (c) of this section and § 171.309.

(c) *Extension of an existing plan during EPA review of proposed revisions.* If by March 4, 2020, a certifying authority has submitted to EPA a proposed modification of its certification plan pursuant to subpart D of this part, its certification plan approved by EPA before March 6, 2017 will remain in effect until EPA has approved or rejected the modified plan pursuant to § 171.309(a)(4) or March 4, 2022, whichever is earlier, except as provided in paragraph (d) of this section and § 171.309(b).

(d) *Extension of an existing plan after EPA has approved a revised plan.* Where EPA has approved a certifying authority's modified certification plan pursuant to § 171.309(a)(4), the certification plan approved by EPA before March 6, 2017 shall remain in effect as specified in EPA's approval of the modified certification plan.

(e) States, Tribes, or Federal agencies that do not have an EPA-approved certification plan in effect may submit to EPA for review and approval a certification plan that meets or exceeds all of the applicable requirements of this part any time.

§§ 171.6, 171.7, 171.8, 171.9, 171.10, 171.11 [Removed]

■ 8. Remove §§ 171.6, 171.7, 171.8, 171.9, 171.10, 171.11.

■ 9. Subpart B is added to part 171 to read as follows:

Subpart B—Certification Requirements for Applicators of Restricted Use Pesticides

Sec.

171.101 Commercial applicator certification categories.

171.103 Standards for certification of commercial applicators.

171.105 Standards for certification of private applicators.

171.107 Standards for recertification of certified applicators.

§ 171.101 Commercial applicator certification categories.

Certification categories. Categories of commercial applicators using or supervising the use of restricted use pesticides are identified below.

(a) *Agricultural pest control.*

(1) *Crop pest control.* This category applies to commercial applicators who

use or supervise the use of restricted use pesticides in production of agricultural commodities, including but not limited to grains, vegetables, small fruits, tree fruits, peanuts, tree nuts, tobacco, cotton, feed and forage crops including grasslands, and non-crop agricultural lands.

(2) *Livestock pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides on animals or to places on or in which animals are confined. Certification in this category alone is not sufficient to authorize the purchase, use, or supervision of use of products for predator control listed in paragraphs (k) and (l) of this section.

(b) *Forest pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides in forests, forest nurseries and forest seed production.

(c) *Ornamental and turf pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides to control pests in the maintenance and production of ornamental plants and turf.

(d) *Seed treatment.* This category applies to commercial applicators using or supervising the use of restricted use pesticides on seeds in seed treatment facilities.

(e) *Aquatic pest control.* This category applies to commercial applicators who use or supervise the use of any restricted use pesticide purposefully applied to standing or running water, excluding applicators engaged in public health related activities included in as specified in paragraph (h) of this section.

(f) *Right-of-way pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides in the maintenance of roadsides, powerlines, pipelines, and railway rights-of-way, and similar areas.

(g) *Industrial, institutional, and structural pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides in, on, or around the following: Food handling establishments, packing houses, and food-processing facilities; human dwellings; institutions, such as schools, hospitals and prisons; and industrial establishments, including manufacturing facilities, warehouses, grain elevators, and any other structures and adjacent areas, public or private, for the protection of stored, processed, or manufactured products.

(h) *Public health pest control.* This category applies to State, Tribal, Federal

or other governmental employees and contractors who use or supervise the use of restricted use pesticides in government-sponsored public health programs for the management and control of pests having medical and public health importance.

(i) *Regulatory pest control.* This category applies to State, Tribal, Federal, or other local governmental employees and contractors who use or supervise the use of restricted use pesticides in government-sponsored programs for the control of regulated pests. Certification in this category does not authorize the purchase, use, or supervision of use of products for predator control listed in paragraphs (k) and (l) of this section.

(j) *Demonstration and research.* This category applies to individuals who demonstrate to the public the proper use and techniques of application of restricted use pesticides or supervise such demonstration and to persons conducting field research with restricted use pesticides, and in doing so, use or supervise the use of restricted use pesticides. This includes such individuals as extension specialists and county agents, commercial representatives demonstrating restricted use pesticide products, individuals demonstrating application or pest control methods used in public or private programs, and State, Federal, commercial, and other persons conducting field research on or involving restricted use pesticides.

(k) *Sodium cyanide predator control.* This pest control category applies to commercial applicators who use or supervise the use of sodium cyanide in a mechanical ejection device to control regulated predators.

(l) *Sodium fluoroacetate predator control.* This pest control category applies to commercial applicators who use or supervise the use of sodium fluoroacetate in a protective collar to control regulated predators.

(m) *Soil fumigation.* This category applies to commercial applicators who use or supervise the use of a restricted use pesticide to fumigate soil.

(n) *Non-soil fumigation.* This category applies to commercial applicators who use or supervise the use of a restricted use pesticide to fumigate anything other than soil.

(o) *Aerial pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides applied by fixed or rotary wing aircraft.

§ 171.103 Standards for certification of commercial applicators.

(a) *Determination of competency.* To be determined to have the necessary competency in the use and handling of restricted use pesticides by a State, Tribe, or Federal agency, a commercial applicator must receive a passing score on a written examination that meets the standards specified in paragraph (a)(2) of this section and any related performance testing that is required by the State, Tribe, or Federal agency. Examinations and any alternate methods employed by the certifying authority to determine applicator competency must include the core standards applicable to all categories (paragraph (c) of this section) and the standards applicable to each category in which an applicator seeks certification (paragraph (d) of this section). Certification processes must meet all of the following criteria:

(1) *Commercial applicator minimum age.* A commercial applicator must be at least 18 years old.

(2) *Examination standards.* The certifying authority must ensure that examinations conform to all of the following standards:

(i) The examination must be presented and answered in writing.

(ii) The examination must be proctored by an individual designated by the certifying authority and who is not seeking certification at any examination session that he or she is proctoring.

(iii) Each person seeking certification must present at the time of examination valid, government-issued photo identification or other form of similarly reliable identification authorized by the certifying authority as proof of identity and age to be eligible for certification.

(iv) Candidates must be monitored throughout the examination period.

(v) Candidates must be instructed in examination procedures before beginning the examination.

(vi) Examinations must be kept secure before, during, and after the examination period so that only the candidates have access to the examination, and candidates have access only in the presence of the proctor.

(vii) Candidates must not have verbal or non-verbal communication with anyone other than the proctor during the examination period.

(viii) No portion of the examination or any associated reference materials described in paragraph (a)(2)(ix) of this section may be copied or retained by any person other than a person authorized by the certifying authority to copy or retain the examination or any

associated reference materials described in paragraph (a)(2)(ix) of this section.

(ix) The only reference materials used during the examination are those that are approved by the certifying authority and provided and collected by the proctor.

(x) Reference materials provided to examinees are reviewed after the examination is complete to ensure that no portion of the reference material has been removed, altered, or destroyed.

(xi) The proctor reports to the certifying authority any examination administration inconsistencies or irregularities, including but not limited to cheating, use of unauthorized materials, and attempts to copy or retain the examination.

(xii) The examination must be conducted in accordance with any other requirements of the certifying authority related to examination administration.

(xiii) The certifying authority must notify each candidate of the results of his or her examination.

(b) *Additional methods of determining competency.* In addition to written examination requirements for determining competency, a certifying authority may employ additional methods for determining applicator competency, such as performance testing. Any such additional methods must be specified in the certifying authority's Agency-approved certification plan and must comply with the applicable standards in paragraph (a) of this section.

(c) *Core standards for all categories of certified commercial applicators.* Persons seeking certification as commercial applicators must demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides by passing a written examination. Written examinations for all commercial applicators must address all of the following areas of competency:

(1) *Label and labeling comprehension.* Familiarity with pesticide labels and labeling and their functions, including all of the following:

(i) The general format and terminology of pesticide labels and labeling.

(ii) Understanding instructions, warnings, terms, symbols, and other information commonly appearing on pesticide labels and labeling.

(iii) Understanding that it is a violation of Federal law to use any registered pesticide in a manner inconsistent with its labeling.

(iv) Understanding labeling requirements that a certified applicator

must be physically present at the site of the application.

(v) Understanding labeling requirements for supervising noncertified applicators working under the direct supervision of a certified applicator.

(vi) Understanding that applicators must comply with all use restrictions and directions for use contained in pesticide labels and labeling, including being certified in the certification category appropriate to the type and site of the application.

(vii) Understanding the meaning of product classification as either general or restricted use and that a product may be unclassified.

(viii) Understanding and complying with product-specific notification requirements.

(ix) Recognizing and understanding the difference between mandatory and advisory labeling language.

(2) *Safety.* Measures to avoid or minimize adverse health effects, including all of the following:

(i) Understanding the different natures of the risks of acute toxicity and chronic toxicity, as well as the long-term effects of pesticides.

(ii) Understanding that a pesticide's risk is a function of exposure and the pesticide's toxicity.

(iii) Recognition of likely ways in which dermal, inhalation, and oral exposure may occur.

(iv) Common types and causes of pesticide mishaps.

(v) Precautions to prevent injury to applicators and other individuals in or near treated areas.

(vi) Need for, and proper use of, protective clothing and personal protective equipment.

(vii) Symptoms of pesticide poisoning.

(viii) First aid and other procedures to be followed in case of a pesticide mishap.

(ix) Proper identification, storage, transport, handling, mixing procedures, and disposal methods for pesticides and used pesticide containers, including precautions to be taken to prevent children from having access to pesticides and pesticide containers.

(3) *Environment.* The potential environmental consequences of the use and misuse of pesticides, including the influence of all of the following:

(i) Weather and other indoor and outdoor climatic conditions.

(ii) Types of terrain, soil, or other substrate.

(iii) Presence of fish, wildlife, and other non-target organisms.

(iv) Drainage patterns.

(4) *Pests.* The proper identification and effective control of pests, including all of the following:

(i) The importance of correctly identifying target pests and selecting the proper pesticide product(s) for effective pest control.

(ii) Verifying that the labeling does not prohibit the use of the product to control the target pest(s).

(5) *Pesticides.* Characteristics of pesticides, including all of the following:

(i) Types of pesticides.

(ii) Types of formulations.

(iii) Compatibility, synergism, persistence, and animal and plant toxicity of the formulations.

(iv) Hazards and residues associated with use.

(v) Factors that influence effectiveness or lead to problems such as pesticide resistance.

(vi) Dilution procedures.

(6) *Equipment.* Application equipment, including all of the following:

(i) Types of equipment and advantages and limitations of each type.

(ii) Use, maintenance, and calibration procedures.

(7) *Application methods.* Selecting appropriate application methods, including all of the following:

(i) Methods used to apply various forms and formulations of pesticides.

(ii) Knowledge of which application method to use in a given situation and that use of a fumigant, aerial application, sodium cyanide, or sodium fluoroacetate requires additional certification.

(iii) How selection of application method and use of a pesticide may result in proper use, unnecessary or ineffective use, and misuse.

(iv) Prevention of drift and pesticide loss into the environment.

(8) *Laws and regulations.* Knowledge of all applicable State, Tribal, and Federal laws and regulations.

(9) *Responsibilities of supervisors of noncertified applicators.* Knowledge of the responsibilities of certified applicators supervising noncertified applicators, including all of the following:

(i) Understanding and complying with requirements in § 171.201 of this part for certified commercial applicators who supervise noncertified applicators using restricted use pesticides.

(ii) The recordkeeping requirements of pesticide safety training for noncertified applicators who use restricted use pesticides under the direct supervision of a certified applicator.

(iii) Providing use-specific instructions to noncertified applicators

using restricted use pesticides under the direct supervision of a certified applicator.

(iv) Explaining pertinent State, Tribal, and Federal laws and regulations to noncertified applicators who use restricted use pesticides under the direct supervision of a certified applicator.

(10) *Professionalism*. Understanding the importance of all of the following:

(i) Maintaining chemical security for restricted use pesticides.

(ii) How to communicate information about pesticide exposures and risks with customers and the public.

(iii) Appropriate product stewardship for certified applicators.

(d) *Specific standards of competency for each category of commercial applicators*. In addition to satisfying the requirements of paragraph (c) of this section, to be certified as commercial applicators, persons must demonstrate through written examinations practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides for each category for which they intend to apply restricted use pesticides, except as provided at §§ 171.303(a)(4) and 171.305(a)(5). The minimum competency standards for each category are listed in paragraphs (d)(1) through (15) of this section. Examinations for each category of certification listed in § 171.101 must be based on the standards of competency specified in paragraphs (d)(1) through (15) of this section and examples of problems and situations appropriate to the particular category in which the applicator is seeking certification.

(1) *Agricultural pest control*.

(i) *Crop pest control*. Applicators must demonstrate practical knowledge of crops, grasslands, and non-crop agricultural lands and the specific pests of those areas on which they may be using restricted use pesticides. The importance of such competency is amplified by the extensive areas involved, the quantities of pesticides needed, and the ultimate use of many commodities as food and feed. The required knowledge includes pre-harvest intervals, restricted entry intervals, phytotoxicity, potential for environmental contamination such as soil and water problems, non-target injury, and other problems resulting from the use of restricted use pesticides in agricultural areas. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures.

(ii) *Livestock pest control*. Applicators must demonstrate practical knowledge of such animals and their associated pests. The required knowledge includes specific pesticide toxicity and residue potential, and the hazards associated with such factors as formulation, application techniques, age of animals, stress, and extent of treatment.

(2) *Forest pest control*. Applicators must demonstrate practical knowledge of types of forests, forest nurseries, and seed production within the jurisdiction of the certifying authority and the pests involved. The required knowledge includes the cyclic occurrence of certain pests and specific population dynamics as a basis for programming pesticide applications, the relevant organisms causing harm and their vulnerability to the pesticides to be applied, how to determine when pesticide use is proper, selection of application method and proper use of application equipment to minimize non-target exposures, and appropriate responses to meteorological factors and adjacent land use. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures.

(3) *Ornamental and turf pest control*. Applicators must demonstrate practical knowledge of pesticide problems associated with the production and maintenance of ornamental plants and turf. The required knowledge includes the potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures. Because of the frequent proximity of human habitations to application activities, applicators in this category must demonstrate practical knowledge of application methods that will minimize or prevent hazards to humans, pets, and other domestic animals.

(4) *Seed treatment*. Applicators must demonstrate practical knowledge including recognizing types of seeds to be treated, the effects of carriers and surface active agents on pesticide binding and germination, the hazards associated with handling, sorting and mixing, and misuse of treated seed, the importance of proper application techniques to avoid harm to non-target organisms, and the proper disposal of unused treated seeds.

(5) *Aquatic pest control*. Applicators must demonstrate practical knowledge of the characteristics of various aquatic use situations, the potential for adverse effects on non-target plants, fish, birds, beneficial insects and other organisms

in the immediate aquatic environment and downstream, and the principles of limited area application.

(6) *Right-of-way pest control*. Applicators must demonstrate practical knowledge of the types of environments (terrestrial and aquatic) traversed by rights-of-way, recognition of target pests, and techniques to minimize non-target exposure, runoff, drift, and excessive foliage destruction. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants and pests to be controlled, and for persistence beyond the intended period of pest control.

(7) *Industrial, institutional, and structural pest control*. Applicators must demonstrate a practical knowledge of industrial, institutional, and structural pests, including recognizing those pests and signs of their presence, their habitats, their life cycles, biology, and behavior as it may be relevant to problem identification and control. Applicators must demonstrate practical knowledge of types of formulations appropriate for control of industrial, institutional and structural pests, and methods of application that avoid contamination of food, minimize damage to and contamination of areas treated, minimize acute and chronic exposure of people and pets, and minimize environmental impacts of outdoor applications.

(8) *Public health pest control*. Applicators must demonstrate practical knowledge of pests that are important vectors of disease, including recognizing the pests and signs of their presence, their habitats, their life cycles, biology and behavior as it may be relevant to problem identification and control. The required knowledge also includes how to minimize damage to and contamination of areas treated, acute and chronic exposure of people and pets, and non-target exposures.

(9) *Regulatory pest control*. Applicators must demonstrate practical knowledge of regulated pests, applicable laws relating to quarantine and other regulation of regulated pests, and the potential impact on the environment of restricted use pesticides used in suppression and eradication programs. They must demonstrate knowledge of factors influencing introduction, spread, and population dynamics of regulated pests.

(10) *Demonstration and research*. Applicators must demonstrate practical knowledge of the potential problems, pests, and population levels reasonably expected to occur in a demonstration situation and the effects of restricted use pesticides on target and non-target organisms. In addition, they must

demonstrate competency in each pest control category applicable to their demonstrations.

(11) *Sodium cyanide predator control*. Applicators must demonstrate practical knowledge of mammalian predator pests, including recognizing those pests and signs of their presence, their habitats, their life cycles, biology, and behavior as it may be relevant to pest identification and control. Applicators must demonstrate comprehension of all laws and regulations applicable to the use of mechanical ejection devices for sodium cyanide, including the restrictions on the use of sodium cyanide products ordered by the EPA Administrator. . Applicators must also demonstrate practical knowledge and understanding of all of the specific use restrictions for sodium cyanide devices, including safe handling and proper placement of the capsules and device, proper use of the antidote kit, notification to medical personnel before use of the device, conditions of and restrictions on when and where devices can be used, requirements to consult U.S. Fish and Wildlife Service maps before use to avoid affecting endangered species, maximum density of devices, provisions for supervising and monitoring applicators, required information exchange in locations where more than one agency is authorized to place devices, and specific requirements for recordkeeping, monitoring, field posting, proper storage, and disposal of damaged or used sodium cyanide capsules.

(12) *Sodium fluoroacetate predator control*. Applicators must demonstrate practical knowledge of mammalian predator pests, including recognizing those pests and signs of their presence, their habitats, their life cycles, biology, and behavior as it may be relevant to pest identification and control. Applicators must demonstrate comprehension of all laws and regulations applicable to the use of sodium fluoroacetate products, including the restrictions on the use of sodium fluoroacetate products ordered by the EPA Administrator. Applicators must also demonstrate practical knowledge and understanding of the specific use restrictions for sodium fluoroacetate in the livestock protection collar, including where and when sodium fluoroacetate products can be used, safe handling and placement of collars, and practical treatment of sodium fluoroacetate poisoning in humans and domestic animals. Applicators must also demonstrate practical knowledge and understanding of specific requirements for field posting, monitoring, recordkeeping,

proper storage of collars, disposal of punctured or leaking collars, disposal of contaminated animal remains, vegetation, soil, and clothing, and reporting of suspected and actual poisoning, mishap, or injury to threatened or endangered species, humans, domestic animals, or non-target wild animals.

(13) *Soil fumigation*. Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing soil fumigation applications, including all the following:

(i) *Label and labeling comprehension*. Familiarity with the pesticide labels and labeling for products used to perform soil fumigation, including all of the following:

(A) Labeling requirements specific to soil fumigants.

(B) Requirements for certified applicators of fumigants, fumigant handlers and permitted fumigant handler activities, and the safety information that certified applicators must provide to noncertified applicators using fumigants under their direct supervision.

(C) Entry-restricted periods for tarped and untarped field application scenarios.

(D) Recordkeeping requirements.

(E) Labeling provisions unique to fumigant products containing certain active ingredients.

(ii) *Safety*. Measures to minimize adverse health effects, including all of the following:

(A) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, field workers, and bystanders can become exposed to fumigants.

(B) Common problems and mistakes that can result in direct exposure to fumigants.

(C) Signs and symptoms of human exposure to fumigants.

(D) Air concentrations of a fumigant that require that applicators wear respirators or exit the work area entirely.

(E) Steps to take if a fumigant applicator experiences sensory irritation.

(F) Understanding air monitoring, when it is required, and where and when to take samples.

(G) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

(H) First aid measures to take in the event of exposure to a soil fumigant.

(I) Labeling requirements for transportation, storage, spill clean up,

and emergency response for soil fumigants, including safe disposal of containers and contaminated soil, and management of empty containers.

(iii) *Soil fumigant chemical characteristics*. Characteristics of soil fumigants, including all of the following:

(A) Chemical characteristics of soil fumigants.

(B) Specific human exposure concerns for soil fumigants.

(C) How soil fumigants change from a liquid or solid to a gas.

(D) How soil fumigants disperse in the application zone.

(E) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(iv) *Application*. Selecting appropriate application methods and timing, including all of the following:

(A) Application methods, including but not limited to water-run and non-water-run applications, and equipment commonly used for each soil fumigant.

(B) Site characteristics that influence fumigant exposure.

(C) Understanding temperature inversions and their impact on soil fumigant application.

(D) Weather conditions that could impact timing of soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications during specific weather conditions.

(E) Conducting pre-application inspection of application equipment.

(F) Understanding the purpose and methods of soil sealing, including the factors that determine which soil sealing method to use.

(G) Understanding the use of tarps, including the range of tarps available, how to seal tarps, and labeling requirements for tarp removal, perforation, and repair.

(H) Calculating the amount of product required for a specific treatment area.

(I) Understanding the basic techniques for calibrating soil fumigant application equipment.

(v) *Soil and pest factors*. Soil and pest factors that influence fumigant activity, including all of the following:

(A) Influence of soil factors on fumigant volatility and movement within the soil profile.

(B) Factors that influence gaseous movement through the soil profile and into the air.

(C) Soil characteristics, including how soil characteristics affect the success of a soil fumigant application, assessing soil moisture, and correcting for soil characteristics that could hinder a successful soil fumigant application.

(D) Identifying pests causing the damage and verifying they can be controlled with soil fumigation.

(E) Understanding the relationship between pest density and application rate.

(F) The importance of proper application depth and timing.

(vi) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(A) Following labeling directions for required personal protective equipment.

(B) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(C) Understanding the types of respirators required when using specific soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

(D) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.

(vii) *Fumigant management plans and post-application summaries.* Information about fumigant management plans, including all of the following:

(A) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.

(B) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(C) The person responsible for verifying that a fumigant management plan is accurate.

(D) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(viii) *Buffer zones and posting requirements.* Understanding buffer zones and posting requirements, including all of the following:

(A) Buffer zones and the buffer zone period.

(B) Identifying who is allowed in a buffer zone during the buffer zone period and who is prohibited from being in a buffer zone during the buffer zone period.

(C) Using the buffer zone table from the labeling to determine the size of the buffer zone.

(D) Factors that determine the buffer zone credits for application scenarios and calculating buffer zones using credits.

(E) Distinguishing buffer zone posting and treated area posting, including the

pre-application and post-application posting timeframes for each.

(F) Proper choice and placement of warning signs.

(14) *Non-soil fumigation.* Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing fumigation applications of restricted use pesticides to sites other than soil, including all the following:

(i) *Label & labeling comprehension.* Familiarity with the pesticide labels and labeling for products used to perform non-soil fumigation, including labeling requirements specific to non-soil fumigants.

(ii) *Safety.* Measures to minimize adverse health effects, including all of the following:

(A) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, and bystanders can become exposed to fumigants.

(B) Common problems and mistakes that can result in direct exposure to fumigants.

(C) Signs and symptoms of human exposure to fumigants.

(D) Air concentrations of a fumigant that require applicators to wear respirators or to exit the work area entirely.

(E) Steps to take if a fumigant applicator experiences sensory irritation.

(F) Understanding air monitoring, when it is required, and where and when to take samples.

(G) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

(H) First aid measures to take in the event of exposure to a fumigant.

(I) Labeling requirements for transportation, storage, spill clean up, and emergency response for non-soil fumigants, including safe disposal of containers and contaminated materials, and management of empty containers.

(iii) *Non-soil fumigant chemical characteristics.* Characteristics of non-soil fumigants, including all of the following:

(A) Chemical characteristics of non-soil fumigants.

(B) Specific human exposure concerns for non-soil fumigants.

(C) How fumigants change from a liquid or solid to a gas.

(D) How fumigants disperse in the application zone.

(E) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(iv) *Application.* Selecting appropriate application methods and timing, including all of the following:

(A) Application methods and equipment commonly used for non-soil fumigation.

(B) Site characteristics that influence fumigant exposure.

(C) Conditions that could impact timing of non-soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications under specific conditions.

(D) Conducting pre-application inspection of application equipment and the site to be fumigated.

(E) Understanding the purpose and methods of sealing the area to be fumigated, including the factors that determine which sealing method to use.

(F) Calculating the amount of product required for a specific treatment area.

(G) Understanding the basic techniques for calibrating non-soil fumigant application equipment.

(H) Understanding when and how to conduct air monitoring and when it is required.

(v) *Pest factors.* Pest factors that influence fumigant activity, including all of the following:

(A) Influence of pest factors on fumigant volatility.

(B) Factors that influence gaseous movement through the area being fumigated and into the air.

(C) Identifying pests causing the damage and verifying they can be controlled with fumigation.

(D) Understanding the relationship between pest density and application rate.

(E) The importance of proper application rate and timing.

(vi) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(A) Following labeling directions for required personal protective equipment.

(B) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(C) Understanding the types of respirators required when using specific non-soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

(D) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.

(vii) *Fumigant management plans and post-application summaries.* Information about fumigant management plans and when they are required, including all of the following:

(A) When a fumigant management plan must be in effect, how long it must

be kept on file, where it must be kept during the application, and who must have access to it.

(B) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(C) The person responsible for verifying that a fumigant management plan is accurate.

(D) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(viii) *Posting requirements.*

Understanding posting requirements, including all of the following:

(A) Understanding who is allowed in an area being fumigated or after fumigation and who is prohibited from being in such areas.

(B) Distinguishing fumigant labeling-required posting and treated area posting, including the pre-application and post-application posting timeframes for each.

(C) Proper choice and placement of warning signs.

(15) *Aerial pest control.* Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing aerial application of restricted use pesticides, including all the following:

(i) *Labeling.* Labeling requirements and restrictions specific to aerial application of pesticides including:

(A) Spray volumes.

(B) Buffers and no-spray zones.

(C) Weather conditions specific to wind and inversions.

(ii) *Application equipment.*

Understand how to choose and maintain aerial application equipment, including all of the following:

(A) The importance of inspecting application equipment to ensure it is in proper operating condition prior to beginning an application.

(B) Selecting proper nozzles to ensure appropriate pesticide dispersal and to minimize drift.

(C) Knowledge of the components of an aerial pesticide application system, including pesticide hoppers, tanks, pumps, and types of nozzles.

(D) Interpreting a nozzle flow rate chart.

(E) Determining the number of nozzles for intended pesticide output using nozzle flow rate chart, aircraft speed, and swath width.

(F) How to ensure nozzles are placed to compensate for uneven dispersal due to uneven airflow from wingtip vortices, helicopter rotor turbulence, and aircraft propeller turbulence.

(G) Where to place nozzles to produce the appropriate droplet size.

(H) How to maintain the application system in good repair, including pressure gauge accuracy, filter cleaning according to schedule, and checking nozzles for excessive wear.

(I) How to calculate required and actual flow rates.

(J) How to verify flow rate using fixed timing, open timing, known distance, or a flow meter.

(K) When to adjust and calibrate application equipment.

(iii) *Application considerations.* The applicator must demonstrate knowledge of factors to consider before and during application, including all of the following:

(A) Weather conditions that could impact application by affecting aircraft engine power, take-off distance, and climb rate, or by promoting spray droplet evaporation.

(B) How to determine wind velocity, direction, and air density at the application site.

(C) The potential impact of thermals and temperature inversions on aerial pesticide application.

(iv) *Minimizing drift.* The applicator must demonstrate knowledge of methods to minimize off-target pesticide movement, including all of the following:

(A) How to determine drift potential of a product using a smoke generator.

(B) How to evaluate vertical and horizontal smoke plumes to assess wind direction, speed, and concentration.

(C) Selecting techniques that minimize pesticide movement out of the area to be treated.

(D) Documenting special equipment configurations or flight patterns used to reduce off-target pesticide drift.

(v) *Performing aerial application.* The applicator must demonstrate competency in performing an aerial pesticide application, including all of the following:

(A) Selecting a flight altitude that minimizes streaking and off-target pesticide drift.

(B) Choosing a flight pattern that ensures applicator and bystander safety and proper application.

(C) The importance of engaging and disengaging spray precisely when entering and exiting a predetermined swath pattern.

(D) Tools available to mark swaths, such as global positioning systems and flags.

(E) Recordkeeping requirements for aerial pesticide applications including application conditions if applicable.

(e) *Exceptions.* The requirements in § 171.103(a)–(d) of this part do not apply to the following persons:

(1) Persons conducting laboratory research involving restricted use pesticides.

(2) Doctors of Medicine and Doctors of Veterinary Medicine applying restricted use pesticides to patients during the course of the ordinary practice of those professions.

171.105 Standards for certification of private applicators.

(a) *General private applicator certification.* Before using or supervising the use of a restricted use pesticide as a private applicator, a person must be certified by an appropriate certifying authority as having the necessary competency to use restricted use pesticides for pest control in the production of agricultural commodities, which includes the ability to read and understand pesticide labeling. Certification in this general private applicator certification category alone is not sufficient to authorize the purchase, use, or supervision of use of the restricted use pesticide products in the categories listed in paragraphs (b) through (f) of this section. Persons seeking certification as private applicators must demonstrate practical knowledge of the principles and practices of pest control associated with the production of agricultural commodities and effective use of restricted use pesticides, including all of the following:

(1) *Label and labeling comprehension.* Familiarity with pesticide labels and labeling and their functions, including all of the following:

(i) The general format and terminology of pesticide labels and labeling.

(ii) Understanding instructions, warnings, terms, symbols, and other information commonly appearing on pesticide labels and labeling.

(iii) Understanding that it is a violation of Federal law to use any registered pesticide in a manner inconsistent with its labeling.

(iv) Understanding when a certified applicator must be physically present at the site of the application based on labeling requirements.

(v) Understanding labeling requirements for supervising noncertified applicators working under the direct supervision of a certified applicator.

(vi) Understanding that applicators must comply with all use restrictions and directions for use contained in pesticide labels and labeling, including being certified in the appropriate category to use restricted use pesticides for fumigation or aerial application, or predator control devices containing

sodium cyanide or sodium fluoroacetate, if applicable.

(vii) Understanding the meaning of product classification as either general or restricted use, and that a product may be unclassified.

(viii) Understanding and complying with product-specific notification requirements.

(ix) Recognizing and understanding the difference between mandatory and advisory labeling language.

(2) *Safety*. Measures to avoid or minimize adverse health effects, including all of the following:

(i) Understanding the different natures of the risks of acute toxicity and chronic toxicity, as well as the long-term effects of pesticides.

(ii) Understanding that a pesticide's risk is a function of exposure and the pesticide's toxicity.

(iii) Recognition of likely ways in which dermal, inhalation, and oral exposure may occur.

(iv) Common types and causes of pesticide mishaps.

(v) Precautions to prevent injury to applicators and other individuals in or near treated areas.

(vi) Need for, and proper use of, protective clothing and personal protective equipment.

(vii) Symptoms of pesticide poisoning.

(viii) First aid and other procedures to be followed in case of a pesticide mishap.

(ix) Proper identification, storage, transport, handling, mixing procedures, and disposal methods for pesticides and used pesticide containers, including precautions to be taken to prevent children from having access to pesticides and pesticide containers.

(3) *Environment*. The potential environmental consequences of the use and misuse of pesticides, including the influence of the following:

(i) Weather and other climatic conditions.

(ii) Types of terrain, soil, or other substrate.

(iii) Presence of fish, wildlife, and other non-target organisms.

(iv) Drainage patterns.

(4) *Pests*. The proper identification and effective control of pests, including all of the following:

(i) The importance of correctly identifying target pests and selecting the proper pesticide product(s).

(ii) Verifying that the labeling does not prohibit the use of the product to control the target pest(s).

(5) *Pesticides*. Characteristics of pesticides, including all of the following:

(i) Types of pesticides.

(ii) Types of formulations.

(iii) Compatibility, synergism, persistence, and animal and plant toxicity of the formulations.

(iv) Hazards and residues associated with use.

(v) Factors that influence effectiveness or lead to problems such as pesticide resistance.

(vi) Dilution procedures.

(6) *Equipment*. Application equipment, including all of the following:

(i) Types of equipment and advantages and limitations of each type.

(ii) Uses, maintenance, and calibration procedures.

(7) *Application methods*. Selecting appropriate application methods, including all of the following:

(i) Methods used to apply various forms and formulations of pesticides.

(ii) Knowledge of which application method to use in a given situation and that use of a fumigant, aerial application, or predator control device containing sodium cyanide or sodium fluoroacetate requires additional certification.

(iii) How selection of application method and use of a pesticide may result in proper use, unnecessary or ineffective use, and misuse.

(iv) Prevention of drift and pesticide loss into the environment.

(8) *Laws and regulations*. Knowledge of all applicable State, Tribal, and Federal laws and regulations, including understanding the Worker Protection Standard in 40 CFR part 170 and the circumstances where compliance is required.

(9) *Responsibilities for supervisors of noncertified applicators*. Certified applicator responsibilities related to supervision of noncertified applicators, including all of the following:

(i) Understanding and complying with requirements in § 171.201 of this part for private applicators who supervise noncertified applicators using restricted use pesticides.

(ii) Providing use-specific instructions to noncertified applicators using restricted use pesticides under the direct supervision of a certified applicator.

(iii) Explaining appropriate State, Tribal, and Federal laws and regulations to noncertified applicators working under the direct supervision of a certified applicator.

(10) *Stewardship*. Understanding the importance of all of the following:

(i) Maintaining chemical security for restricted use pesticides.

(ii) How to communicate information about pesticide exposures and risks with agricultural workers and handlers and other persons.

(11) *Agricultural pest control*.

Practical knowledge of pest control applications to agricultural commodities including all of the following:

(i) Specific pests of relevant agricultural commodities.

(ii) How to avoid contamination of ground and surface waters.

(iii) Understanding pre-harvest and restricted entry intervals and entry-restricted periods and areas.

(iv) Understanding specific pesticide toxicity and residue potential when pesticides are applied to animal or animal product agricultural commodities.

(v) Relative hazards associated with using pesticides on animals or places in which animals are confined based on formulation, application technique, age of animal, stress, and extent of treatment.

(b) *Sodium cyanide predator control*.

In addition to satisfying the requirements in paragraph (a) of this section, in order to use sodium cyanide in a mechanical ejection device, private applicators must demonstrate comprehension of all laws and regulations applicable to the use of mechanical ejection devices for sodium cyanide, including the restrictions on the use of sodium cyanide products ordered by the EPA Administrator.

Applicators must also demonstrate practical knowledge and understanding of all of the specific use restrictions for sodium cyanide devices, including safe handling and proper placement of the capsules and device, proper use of the antidote kit, notification to medical personnel before use of the device, conditions of and restrictions on where devices can be used, requirements to consult U.S. Fish and Wildlife Service maps before use to avoid affecting endangered species, maximum density of devices, provisions for supervising and monitoring applicators, required information exchange in locations where more than one agency is authorized to place devices, and specific requirements for recordkeeping, monitoring, field posting, proper storage, and disposal of damaged or used sodium cyanide capsules.

(c) *Sodium fluoroacetate predator control*. In addition to satisfying the requirements in paragraph (a) of this section, in order to use sodium fluoroacetate, private applicators must demonstrate comprehension of all laws and regulations applicable to the use of sodium fluoroacetate products, including the restrictions on the use of sodium fluoroacetate products ordered by the EPA Administrator. Applicators must also demonstrate practical knowledge and understanding of the

specific use restrictions for sodium fluoroacetate in the livestock protection collar, including where and when sodium fluoroacetate products can be used, safe handling and placement of collars, and practical treatment of sodium fluoroacetate poisoning in humans and domestic animals. Applicators must also demonstrate practical knowledge and understanding of specific requirements for field posting, monitoring, recordkeeping, proper storage of collars, disposal of punctured or leaking collars, disposal of contaminated animal remains, vegetation, soil, and clothing, and reporting of suspected and actual poisoning, mishap, or injury to threatened or endangered species, humans, domestic animals, or non-target wild animals.

(d) *Soil fumigation.* In addition to satisfying the requirements in paragraph (a) of this section, private applicators that use or supervise the use of a restricted use pesticide to fumigate soil must demonstrate practical knowledge of the pest problems and pest control practices associated with performing soil fumigant applications, including all the following:

(1) *Label and labeling comprehension.* Familiarity with the pesticide labels and labeling for products used to perform soil fumigation, including all of the following:

(i) Labeling requirements specific to soil fumigants.

(ii) Requirements for certified applicators of fumigants, fumigant handlers and permitted fumigant handler activities, and the safety information that certified applicators must provide to noncertified applicators using fumigants under the direct supervision of certified applicators.

(iii) Entry-restricted period for different tarped and untarped field application scenarios.

(iv) Recordkeeping requirements imposed by product labels and labeling.

(v) Labeling provisions unique to products containing certain active ingredients.

(vi) Labeling requirements for fumigant management plans, such as when a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it; the elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan; the person responsible for verifying that a fumigant management plan is accurate; and the elements, purpose and content of a post-

application summary, who must prepare it, and when it must be completed.

(2) *Safety.* Measures to minimize adverse health effects, including all of the following:

(i) Understanding how certified applicators, noncertified applicators using fumigants under the direct supervision of certified applicators, field workers, and bystanders can become exposed to fumigants.

(ii) Common problems and mistakes that can result in direct exposure to fumigants.

(iii) Signs and symptoms of human exposure to fumigants.

(iv) Air concentrations of a fumigant that require applicators to wear respirators or to exit the work area entirely.

(v) Steps to take if a fumigant applicator experiences sensory irritation.

(vi) Understanding air monitoring, when it is required, and where and when to take samples.

(vii) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

(viii) First aid measures to take in the event of exposure to a soil fumigant.

(ix) Labeling requirements for transportation, storage, spill cleanup, and emergency response for soil fumigants, including safe disposal of containers and contaminated soil, and management of empty containers.

(3) *Soil fumigant chemical characteristics.* Characteristics of soil fumigants, including all of the following:

(i) Chemical characteristics of soil fumigants.

(ii) Specific human exposure concerns for soil fumigants.

(iii) How soil fumigants change from a liquid or solid to a gas.

(iv) How soil fumigants disperse in the application zone.

(v) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(4) *Application.* Selecting appropriate application methods and timing, including all of the following:

(i) Application methods, including but not limited to water-run and non-water-run applications, and equipment commonly used for each soil fumigant.

(ii) Site characteristics that influence fumigant exposure.

(iii) Understanding temperature inversions and their impact on soil fumigant application.

(iv) Weather conditions that could impact timing of soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements

limiting applications during specific weather conditions.

(v) Conducting pre-application inspection of application equipment.

(vi) Understanding the purpose and methods of soil sealing, including the factors that determine which soil sealing method to use.

(vii) Understanding the use of tarps, including the range of tarps available, how to seal tarps, and labeling requirements for tarp removal, perforation, and repair.

(viii) Calculating the amount of product required for a specific treatment area.

(ix) Understanding the basic techniques for calibrating soil fumigant application equipment.

(5) *Soil and pest factors.* Soil and pest factors that influence fumigant activity, including all of the following:

(i) Influence of soil factors on fumigant volatility and movement within the soil profile.

(ii) Factors that influence gaseous movement through the soil profile and into the air.

(iii) Soil characteristics, including how soil characteristics affect the success of a soil fumigant application, assessing soil moisture, and correcting for soil characteristics that could hinder a successful soil fumigant application.

(iv) Identifying pests causing the damage and verifying they can be controlled with soil fumigation.

(v) Understanding the relationship between pest density and application rate.

(vi) The importance of proper application depth and timing.

(6) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(i) Following labeling directions for required personal protective equipment.

(ii) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(iii) Understanding the types of respirators required when using specific soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

(iv) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.

(7) *Fumigant management plans and post-application summaries.*

Information about fumigant management plans, including all of the following:

(i) When a fumigant management plan must be in effect, how long it must be

kept on file, where it must be kept during the application, and who must have access to it.

(ii) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(iii) The person responsible for verifying that a fumigant management plan is accurate.

(iv) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(8) *Buffer zones and posting requirements.* Understanding buffer zones and posting requirements, including all of the following:

(i) Buffer zones and the buffer zone period.

(ii) Identifying who may be in a buffer zone during the buffer zone period and who is prohibited from being in a buffer zone during the buffer zone period.

(iii) Using the buffer zone table from the labeling to determine the size of the buffer zone.

(iv) Factors that determine the buffer zone credits for application scenarios and calculating buffer zones using credits.

(v) Distinguishing buffer zone posting and treated area posting, including the pre-application and post-application posting timeframes for each.

(vi) Proper choice and placement of warning signs.

(e) *Non-soil fumigation.* In addition to satisfying the requirements in paragraph (a) of this section, private applicators that use or supervise the use of a restricted use pesticide to fumigate anything other than soil must demonstrate practical knowledge of the pest problems and pest control practices associated with performing fumigation applications to sites other than soil, including all the following:

(1) *Label and labeling comprehension.* Familiarity with the pesticide labels and labeling for products used to perform non-soil fumigation, including labeling requirements specific to non-soil fumigants.

(2) *Safety.* Measures to minimize adverse health effects, including all of the following:

(i) Understanding how certified applicators, handlers, and bystanders can become exposed to fumigants.

(ii) Common problems and mistakes that can result in direct exposure to fumigants.

(iii) Signs and symptoms of human exposure to fumigants.

(iv) When air concentrations of a fumigant triggers handlers to wear respirators or to exit the work area entirely.

(v) Steps to take if a person using a fumigant experiences sensory irritation.

(vi) Understanding air monitoring, when it is required, and where and when to take samples.

(vii) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

(viii) First aid measures to take in the event of exposure to a fumigant.

(ix) Labeling requirements for transportation, storage, spill clean up, and emergency response for non-soil fumigants, including safe disposal of containers and contaminated materials, and management of empty containers.

(3) *Non-soil fumigant chemical characteristics.* Characteristics of non-soil fumigants, including all of the following:

(i) Chemical characteristics of non-soil fumigants.

(ii) Specific human exposure concerns for non-soil fumigants.

(iii) How fumigants change from a liquid or solid to a gas.

(iv) How fumigants disperse in the application zone.

(v) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(4) *Application.* Selecting appropriate application methods and timing, including all of the following:

(i) Application methods and equipment commonly used for non-soil fumigation.

(ii) Site characteristics that influence fumigant exposure.

(iii) Conditions that could impact timing of non-soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications when specific conditions are present.

(iv) Conducting pre-application inspection of application equipment and the site to be fumigated.

(v) Understanding the purpose and methods of sealing the area to be fumigated, including the factors that determine which sealing method to use.

(vi) Calculating the amount of product required for a specific treatment area.

(vii) Understanding the basic techniques for calibrating non-soil fumigant application equipment.

(viii) Understanding when and how to conduct air monitoring and when it is required.

(5) *Pest factors.* Pest factors that influence fumigant activity, including all of the following:

(i) Influence of pest factors on fumigant volatility.

(ii) Factors that influence gaseous movement through the area being fumigated and into the air.

(iii) Identifying pests causing the damage and verifying they can be controlled with fumigation.

(iv) Understanding the relationship between pest density and application rate.

(v) The importance of proper application rate and timing.

(6) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(i) Following labeling directions for required personal protective equipment.

(ii) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(iii) Understanding the types of respirators required when using specific soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

(iv) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.

(7) *Fumigant management plans and post-application summaries.*

Information about fumigant management plans and when they are required, including all of the following:

(i) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.

(ii) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(iii) The person responsible for verifying that a fumigant management plan is accurate.

(iv) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(8) *Posting requirements.*

Understanding posting requirements, including all of the following:

(i) Understanding who is allowed in an area being fumigated or after fumigation and who is prohibited from being in such areas.

(ii) Distinguishing fumigant labeling-required posting and treated area posting, including the pre-application and post-application posting timeframes for each.

(iii) Proper choice and placement of warning signs.

(f) *Aerial pest control.* In addition to satisfying the requirements in paragraph (a) of this section, private applicators that use or supervise the use of restricted use pesticides applied by fixed or rotary wing aircraft must

demonstrate practical knowledge of the pest problems and pest control practices associated with performing aerial application, including all the following:

(1) *Labeling*. Labeling requirements and restrictions specific to aerial application of pesticides including:

- (i) Spray volumes.
- (ii) Buffers and no-spray zones.
- (iii) Weather conditions specific to wind and inversions.
- (iv) Labeling-mandated recordkeeping requirements for aerial pesticide applications including application conditions if applicable.

(2) *Application equipment*.

Understand how to choose and maintain aerial application equipment, including all of the following:

- (i) The importance of inspecting application equipment to ensure it is in proper operating condition prior to beginning an application.
- (ii) Selecting proper nozzles to ensure appropriate pesticide dispersal and to minimize drift.
- (iii) Knowledge of the components of an aerial pesticide application system, including pesticide hoppers, tanks, pumps, and types of nozzles.
- (iv) Interpreting a nozzle flow rate chart.

(v) Determining the number of nozzles for intended pesticide output using nozzle flow rate chart, aircraft speed, and swath width.

(vi) How to ensure nozzles are placed to compensate for uneven dispersal due to uneven airflow from wingtip vortices, helicopter rotor turbulence, and aircraft propeller turbulence.

(vii) Where to place nozzles to produce the appropriate droplet size.

(viii) How to maintain the application system in good repair, including pressure gauge accuracy, filter cleaning according to schedule, and checking nozzles for excessive wear.

(ix) How to calculate required and actual flow rates.

(x) How to verify flow rate using fixed timing, open timing, known distance, or a flow meter.

(xi) When to adjust and calibrate application equipment.

(3) *Application considerations*. The applicator must demonstrate knowledge of factors to consider before and during application, including all of the following:

(i) Weather conditions that could impact application by affecting aircraft engine power, take-off distance, and climb rate, or by promoting spray droplet evaporation.

(ii) How to determine wind velocity, direction, and air density at the application site.

(iii) The potential impact of thermals and temperature inversions on aerial pesticide application.

(4) *Minimizing drift*. The applicator must demonstrate knowledge of methods to minimize off-target pesticide movement, including all of the following:

(i) How to determine drift potential of a product using a smoke generator.

(ii) How to evaluate vertical and horizontal smoke plumes to assess wind direction, speed, and concentration.

(iii) Selecting techniques that minimize pesticide movement out of the area to be treated.

(iv) Documenting special equipment configurations or flight patterns used to reduce off-target pesticide drift.

(5) *Performing aerial application*. The applicator must demonstrate competency in performing an aerial pesticide application, including all of the following:

(i) Selecting a flight altitude that minimizes streaking and off-target pesticide drift.

(ii) Choosing a flight pattern that ensures applicator and bystander safety and proper application.

(iii) The importance of engaging and disengaging spray precisely when entering and exiting a predetermined swath pattern.

(iv) Tools available to mark swaths, such as global positioning systems and flags.

(g) *Private applicator minimum age*. A private applicator must be at least 18 years old.

(h) *Private applicator competency*. The competency of each candidate for private applicator certification must be established by the certifying authority based upon the certification standards set forth in paragraphs (a) through (g) of this section in order to assure that private applicators have the competency to use and supervise the use of restricted use pesticides in accordance with applicable State, Tribal, and Federal laws and regulations. The certifying authority must use either a written examination process as described in paragraph (h)(1) of this section or a non-examination training process as described in paragraph (h)(2) of this section to assure the competency of private applicators in regard to the general certification standards applicable to all private applicators outlined in paragraph (a) of this section, and, if applicable, the specific standards for the each of the categories outlined in paragraphs (b) through (f) of this section in which a private applicator is to be certified.

(1) *Determination of competency by examination*. If the certifying authority

uses an examination process to determine the competency of private applicators, the examination process must meet all of the requirements of § 171.103(a)(2).

(2) *Training for competency without examination*. Any candidate for certification as a private applicator may complete a training program approved by the certifying authority to establish competency. A training program to establish private applicator competency must conform to all of the following criteria:

(i) *Identification*. Each person seeking certification must present a valid, government-issued photo identification, or other form of similarly reliable identification authorized by the certifying authority, to the certifying authority or designated representative as proof of identity and age at the time of the training program to be eligible for certification.

(ii) *Training programs for private applicator general certification and category certification*.

(A) The training program for general private applicator certification must cover the competency standards outlined in paragraph (a) of this section in sufficient detail to allow the private applicator to demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides.

(B) The training program for each relevant category for private applicator certification must cover the competency standards outlined in paragraphs (b) through (f) of this section in sufficient detail to allow the private applicator to demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides for each category in which he or she intends to apply restricted use pesticides, and must be in addition to the training program required for general private applicator certification.

(i) *Exceptions*. The requirements in § 171.105(a)–(h) of this part do not apply to the following persons:

(1) Persons conducting laboratory research involving restricted use pesticides.

(2) Doctors of Medicine and Doctors of Veterinary Medicine applying restricted use pesticides to patients during the course of the ordinary practice of those professions.

§ 171.107 Standards for recertification of certified applicators.

(a) *Maintenance of continued competency*. Each commercial and private applicator certification shall expire five years after issuance, unless

the applicator is recertified in accordance with this section. A certifying authority may establish a shorter certification period. In order for a certified applicator's certification to continue without interruption, the certified applicator must be recertified under this section before the expiration of his or her current certification.

(b) *Process for recertification.* Minimum standards for recertification by written examination, or through continuing education programs, are as follows:

(1) *Written examination.* A certified applicator may be found eligible for recertification upon passing a written examination approved by the certifying authority and that is designed to evaluate whether the certified applicator demonstrates the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators. The examination shall conform to the applicable standards for examinations set forth in § 171.103(a)(2) of this part.

(2) *Continuing education programs.* A certified applicator may be found eligible for recertification upon successfully completing a continuing education program pursuant to the certifying authority's EPA-approved certification plan.

(i) The quantity, content, and quality of a continuing education program to maintain applicator certification must be sufficient to ensure the applicator continues to demonstrate the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators.

(ii) Any continuing education course or event relied upon for applicator recertification must be approved by the certifying authority as being suitable for its purpose in the certifying authority's recertification process.

(iii) A certifying authority must ensure that any continuing education course or event, including an online or other distance education course or event, relied upon for applicator recertification includes a process to verify the applicator's successful completion of the course or event.

■ 10. Subpart C is added to part 171 to read as follows:

Subpart C—Supervision of Noncertified Applicators

Sec.

171.201 Requirements for direct supervision of noncertified applicators by certified applicators.

171.201 Requirements for direct supervision of noncertified applicators by certified applicators.

(a) *Applicability.* This section applies to any certified applicator who allows or relies on a noncertified applicator to use a restricted use pesticide under the certified applicator's direct supervision.

(b) *General requirements.* (1) Requirements for the certified applicator.

(i) The certified applicator must have a practical knowledge of applicable Federal, State and Tribal supervisory requirements, including any requirements on the product label and labeling, regarding the use of restricted use pesticides by noncertified applicators.

(ii) The certified applicator must be certified in each category as set forth in §§ 171.101 and 171.105(a) through (f) applicable to the supervised pesticide use.

(2) Requirements for the noncertified applicator. The certified applicator must ensure that each noncertified applicator using a restricted use pesticide under his or her direct supervision meets all of the following requirements before using a restricted use pesticide:

(i) The noncertified applicator has satisfied the qualification requirements under paragraph (c) of this section.

(ii) The noncertified applicator has been instructed within the last 12 months in the safe operation of any equipment he or she will use for mixing, loading, transferring, or applying pesticides.

(iii) The noncertified applicator has met the minimum age required to use restricted use pesticides under the supervision of a certified applicator. A noncertified applicator must be at least 18 years old, except that a noncertified applicator must be at least 16 years old if all of the following requirements are met:

(A) The noncertified applicator is using the restricted use pesticide under the direct supervision of a private applicator who is an immediate family member.

(B) The restricted use pesticide is not a fumigant, sodium cyanide, or sodium fluoroacetate.

(C) The noncertified applicator is not applying the restricted use pesticide aerially.

(3) Use-specific conditions that must be met in order for a noncertified applicator to use a restricted use pesticide. The certified applicator must ensure that all of the following requirements are met before allowing a noncertified applicator to use a restricted use pesticide under his or her direct supervision:

(i) The certified applicator must ensure that the noncertified applicator has access to the applicable product labeling at all times during its use.

(ii) Where the labeling of a pesticide product requires that personal protective equipment be worn for mixing, loading, application, or any other use activities, the certified applicator must ensure that any noncertified applicator has clean, labeling-required personal protective equipment in proper operating condition and that the personal protective equipment is worn and used correctly for its intended purpose.

(iii) The certified applicator must provide to each noncertified applicator before use of a restricted use pesticide instructions specific to the site and pesticide used. These instructions must include labeling directions, precautions, and requirements applicable to the specific use and site, and how the characteristics of the use site (*e.g.*, surface and ground water, endangered species, local population) and the conditions of application (*e.g.*, equipment, method of application, formulation) might increase or decrease the risk of adverse effects. The certified applicator must provide this information in a manner that the noncertified applicator can understand.

(iv) The certified applicator must ensure that before each day of use equipment used for mixing, loading, transferring, or applying pesticides is in proper operating condition as intended by the manufacturer, and can be used without risk of reasonably foreseeable adverse effects to the noncertified applicator, other persons, or the environment.

(v) The certified applicator must ensure that a means to immediately communicate with the certified applicator is available to each noncertified applicator using restricted use pesticides under his or her direct supervision.

(vi) The certified applicator must be physically present at the site of the use being supervised when required by the product labeling.

(vii) If the certified applicator is a commercial applicator, the certified applicator must create or verify the existence of the records required by paragraph (e) of this section.

(c) *Noncertified applicator qualifications.* Before any noncertified applicator uses a restricted use pesticide under the direct supervision of the certified applicator, the supervising certified applicator must ensure that the noncertified applicator has met at least one of the following qualifications:

(1) The noncertified applicator has been trained in accordance with paragraph (d) of this section within the last 12 months.

(2) The noncertified applicator has met the training requirements for an agricultural handler under 40 CFR 170.501 of this title within the last 12 months.

(3) The noncertified applicator has met the requirements established by a certifying authority that meet or exceed the standards in § 171.201(c)(1).

(4) The noncertified applicator is currently a certified applicator but is not certified to perform the type of application being conducted or is not certified in the jurisdiction where the use will take place.

(d) *Noncertified applicator training program.* (1) General noncertified applicator training must be presented to noncertified applicators either orally from written materials or audiovisually. The information must be presented in a manner that the noncertified applicators can understand, such as through a translator. The person conducting the training must be present during the entire training program and must respond to the noncertified applicators' questions.

(2) The person who conducts the training must meet one of the following criteria:

(i) Be currently certified as an applicator of restricted use pesticides under this part.

(ii) Be currently designated as a trainer of certified applicators or pesticide handlers by EPA, the certifying authority, or a State, Tribal, or Federal agency having jurisdiction.

(iii) Have completed an EPA-approved pesticide safety train-the-trainer program for trainers of handlers under 40 CFR part 170.

(3) The noncertified applicator training materials must include the information that noncertified applicators need in order to protect themselves, other people, and the environment before, during, and after making a restricted use pesticide application. The noncertified applicator training materials must include, at a minimum, the following:

(i) Potential hazards from toxicity and exposure that pesticides present to noncertified applicators and their families, including acute and chronic effects, delayed effects, and sensitization.

(ii) Routes through which pesticides can enter the body.

(iii) Signs and symptoms of common types of pesticide poisoning.

(iv) Emergency first aid for pesticide injuries or poisonings.

(v) Routine and emergency decontamination procedures, including emergency eye flushing techniques. Noncertified applicators must be instructed that if pesticides are spilled or sprayed on the body, to immediately wash or to rinse off in the nearest clean water. Noncertified applicators must also be instructed to wash or shower with soap and water, shampoo hair, and change into clean clothes as soon as possible.

(vi) How and when to obtain emergency medical care.

(vii) After working with pesticides, wash hands before eating, drinking, using chewing gum or tobacco, or using the toilet.

(viii) Wash or shower with soap and water, shampoo hair and change into clean clothes as soon as possible after working with pesticides.

(ix) Potential hazards from pesticide residues on clothing.

(x) Wash work clothes before wearing them again and wash them separately from other clothes.

(xi) Do not take pesticides or pesticide containers used at work to your home.

(xii) Potential hazards to children and pregnant women from pesticide exposure.

(xiii) After working with pesticides, remove work boots or shoes before entering your home, and remove work clothes and wash or shower before physical contact with children or family members.

(xiv) How to report suspected pesticide use violations to the appropriate State or Tribal agency responsible for pesticide enforcement.

(xv) Format and meaning of information contained on pesticide labels and in labeling applicable to the safe use of the pesticide, including the location and meaning of the restricted use product statement, how to identify when the labeling requires the certified applicator to be physically present during the use of the pesticide, and information on personal protective equipment.

(xvi) Need for, and appropriate use and removal of, personal protective equipment.

(xvii) How to recognize, prevent, and provide first aid treatment for heat-related illness.

(xviii) Safety requirements for handling, transporting, storing, and disposing of pesticides, including general procedures for spill cleanup.

(xix) Environmental concerns such as drift, runoff, and wildlife hazards.

(xx) Restricted use pesticides may be used only by a certified applicator or by a noncertified applicator working under

the direct supervision of a certified applicator.

(xxi) The certified applicator's responsibility to provide to each noncertified applicator instructions specific to the site and pesticide used. These instructions must include labeling directions, precautions, and requirements applicable to the specific use and site, and how the characteristics of the use site (*e.g.*, surface and ground water, endangered species, local population, and risks) and the conditions of application (*e.g.*, equipment, method of application, formulation, and risks) might increase or decrease the risk of adverse effects. The certified applicator must provide these instructions in a manner the noncertified applicator can understand.

(xxii) The certified applicator's responsibility to ensure that each noncertified applicator has access to the applicable product labeling at all times during its use.

(xxiii) The certified applicator's responsibility to ensure that where the labeling of a pesticide product requires that personal protective equipment be worn for mixing, loading, application, or any other use activities, each noncertified applicator has clean, labeling-required personal protective equipment in proper operating condition and that the personal protective equipment is worn and use correctly for its intended purpose.

(xxiv) The certified applicator's responsibility to ensure that before each day of use equipment used for mixing, loading, transferring, or applying pesticides is in proper operating condition as intended by the manufacturer, and can be used without risk of reasonably foreseeable adverse effects to the noncertified applicator, other persons, or the environment.

(xxv) The certified applicator's responsibility to ensure that a means to immediately communicate with the certified applicator is available to each noncertified applicator using restricted use pesticides under his or her direct supervision.

(e) *Recordkeeping.* (1) Commercial applicators must create or verify the existence of records documenting that each noncertified applicator has the qualifications required in paragraph (c) of this section. For each noncertified applicator, the records must contain the information appropriate to the method of qualification as provided in paragraphs (e)(1)(i) through (e)(1)(iv).

(i) If the noncertified applicator was trained in accordance with paragraph (c)(1) of this section, the record must contain all of the following information:

(A) The noncertified applicator's printed name and signature.

(B) The date the training requirement in paragraph (c) of this section was met.

(C) The name of the person who provided the training.

(D) The title or a description of the training provided.

(ii) If the noncertified applicator was trained as an agricultural handler under 40 CFR 170.501 in accordance with paragraph (c)(2) of this section, the record must contain all of the information required at 40 CFR 170.501(d)(1).

(iii) If the noncertified applicator qualified by satisfying the requirements established by the certifying authority, as described in paragraph (c)(3) of this section, the record must contain the information required by the certifying authority.

(iv) If the noncertified applicator is a certified applicator who is not certified to perform the type of application being conducted or not certified in the jurisdiction where the use will take place, as described in paragraph (c)(4) of this section, the record must include all of the following information:

(A) The noncertified applicator's name.

(B) The noncertified applicator's certification number.

(C) The expiration date of the noncertified applicator's certification.

(D) The certifying authority that issued the certification.

(2) The commercial applicator must create or verify the existence of the record containing the information in paragraph (e)(1) of this section before allowing the noncertified applicator to use restricted use pesticides under his or her direct supervision.

(3) The commercial applicator supervising any noncertified applicator must have access to records documenting the information required in paragraph (e)(1) of this section at the commercial applicator's principal place of business for two years from the date the noncertified applicator used the restricted use pesticide.

(f) *Exceptions.* The requirements in § 171.201(a) through (e) of this part do not apply to the following persons:

(1) Persons conducting laboratory research involving restricted use pesticides.

(2) Doctors of Medicine and Doctors of Veterinary Medicine applying restricted use pesticides to patients during the course of the ordinary practice of those professions.

■ 11. Subpart D is added to part 171 to read as follows:

Subpart D—Certification Plans

Sec.

171.301 General.

171.303 Requirements for State certification plans.

171.305 Requirements for Federal agency certification plans.

171.307 Certification of applicators in Indian country.

171.309 Modification and withdrawal of approval of certification plans.

171.311 EPA-administered applicator certification programs.

§ 171.301 General.

(a) *Jurisdiction.* A certification issued under a particular certifying authority's certification plan is only valid within the geographical area specified in the certification plan approved by the Agency.

§ 171.303 Requirements for State certification plans.

(a) *Conformance with Federal standards for certification of applicators of restricted use pesticides.* A State may certify applicators of restricted use pesticides only in accordance with a State certification plan approved by the Agency. The State certification plan must meet all of the following requirements:

(1) The State certification plan must include a full description of the proposed process the State will use to assess applicator competency to use or supervise the use of restricted use pesticides in the State.

(2) The State certification plan must specify which of the certification categories listed in § 171.101 will be included in the plan.

(i) A State certification plan may omit any unneeded certification categories.

(ii) A State certification plan may designate subcategories within the categories described in §§ 171.101 and 171.105(b) through (f) as it deems necessary.

(iii) A State certification plan may include additional certification categories not covered by the existing Federal categories described in §§ 171.101 and 171.105(b)–(f).

(iv) A State certification plan may combine the categories described in § 171.101(m) through (n) into a single general fumigation category for commercial applicators.

(v) A State certification plan may combine the categories described in § 171.105(d) through (e) into a single general fumigation category for private applicators.

(3) For each of the categories adopted pursuant to paragraph (b)(1) of this section, the State certification plan must include standards for the certification of applicators of restricted use pesticides

that meet or exceed those standards prescribed by the Agency under §§ 171.101 through 171.105, except as provided in paragraph (a)(4) of this section.

(4) A State may adopt a limited use category for commercial applicators. A limited use category covers a small number of commercial applicators engaged in a use that does not clearly fit within any of the commercial applicator categories specified pursuant to paragraph (b)(2) of this section, and allows only the use of a limited set of restricted use pesticides by specific application methods. A State adopting a limited use category must include all of the following in its certification plan:

(i) A definition of the limited use category, specifying the restricted use pesticide(s), use sites, and specific application methods permitted.

(ii) An explanation of why it is not practical to include the limited use within any of the commercial applicator categories specified pursuant to paragraph (b)(2) of this section.

(iii) A requirement that candidates for certification in a limited use category pass the written examination covering the core standards at § 171.103(c) and demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticide(s) covered by the limited use category.

(iv) Specific competency standards for the limited use category.

(v) The process by which applicators must demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of the restricted use pesticides authorized under the limited use category based on the competency standards identified in paragraph (a)(4)(iv) of this section. This does not have to be accomplished by a written examination.

(vi) A description of the recertification standards for the limited use category and how those standards meet or exceed the standards prescribed by the Agency under § 171.107.

(vii) A description of the limited use certification credential. The credential must clearly state that the applicator is only authorized to purchase and use the specific restricted use pesticide(s) identified in that credential.

(5) The State certification plan must include standards for certification examinations that meet or exceed the standards prescribed by the Agency under § 171.103(a)(2), including a description of any alternative identification that a State will authorize in addition to a valid, government-issued photo identification.

(6) The State certification plan must include standards for the recertification of applicators of restricted use pesticides that meet or exceed those standards prescribed by the Agency under § 171.107.

(7) The State certification plan must include standards for the direct supervision of noncertified applicators by certified private and commercial applicators of restricted use pesticides that meet or exceed those standards prescribed by the Agency under § 171.201, or must state that use by noncertified applicators is not permitted.

(8) The State certification plan must describe the credentials or documents the State certifying authority will issue to each certified applicator verifying certification.

(9) A State may waive any or all of the procedures specified in § 171.103, § 171.105, and § 171.107 of this part when certifying applicators in reliance on valid current certifications issued by another State, Tribal, or Federal agency under an EPA-approved certification plan. The State certification plan must explain whether, and if so, under what circumstances, the State will certify applicators based in whole or in part on their holding a valid current certification issued by another State, Tribe or Federal agency. Such certifications are subject to all of the following conditions:

(i) A State may rely only on valid current certifications that are issued under an approved State, Tribal or Federal agency certification plan.

(ii) The State has examined the standards of competency used by the State, Tribe, or Federal agency that originally certified the applicator and has determined that, for each category of certification that will be accepted, they are comparable to its own standards.

(iii) Any State that chooses to certify applicators based, in whole or in part, on the applicator having been certified by another State, Tribe, or Federal agency, must include in its plan a mechanism that allows the State to terminate an applicator's certification upon notification that the applicator's original certification terminates because the certificate holder has been convicted under section 14(b) of FIFRA or has been subject to a final order imposing a civil penalty under section 14(a) of FIFRA.

(iv) The State issuing a certification based in whole or in part on the applicator holding a valid current certification issued by another State, Tribe or Federal agency must issue an appropriate State credential or document to the applicator.

(b) *Contents of an application for EPA approval of a State plan for certification of applicators of restricted use pesticides.*

(1) The application for Agency approval of a State certification plan must list and describe the categories of certification.

(2) The application for Agency approval of a State certification plan must contain satisfactory documentation that the State standards for the certification of commercial applicators meet or exceed those standards prescribed by the Agency under §§ 171.101 and 171.103. Such documentation must include one of the following:

(i) A statement that the State has adopted the same standards for certification of commercial applicators prescribed by the Agency under §§ 171.101 and 171.103 and a citation of the specific State laws and/or regulations demonstrating that the State has adopted such standards.

(ii) A statement that the State has adopted its own standards that meet or exceed the standards for certification of commercial applicators prescribed by the Agency under §§ 171.101 and 171.103. If the State selects this option, the application for Agency approval of a State certification plan must include all of the following:

(A) A list and detailed description of all the categories and subcategories to be used for certification of commercial applicators in the State and a citation to the specific State laws and/or regulations demonstrating that the State has adopted such categories and subcategories.

(B) A list and detailed description of all of the standards for certification of commercial applicators adopted by the State and a citation to the specific State laws and/or regulations demonstrating that the State has adopted such standards. Any additional categories or subcategories established by a State must be included in the application for Agency approval of a State plan and must clearly describe the standards the State will use to determine if the applicator has the necessary competency.

(C) A description of the State's commercial applicator certification examination standards and an explanation of how they meet or exceed the standards prescribed by the Agency under § 171.103(a)(2).

(3) The application for Agency approval of a State certification plan must contain satisfactory documentation that the State standards for the certification of private applicators meet or exceed those

standards prescribed by the Agency under § 171.105. Such documentation must include a statement that the State has adopted its own standards that meet or exceed the standards for certification of private applicators of restricted use pesticides prescribed by the Agency under § 171.105. The application for Agency approval of a State certification plan must include all of the following:

(i) A list and detailed description of all the categories and subcategories to be used for certification of private applicators in the State and a citation to the specific State laws and/or regulations demonstrating that the State has adopted such categories and subcategories.

(ii) A list and detailed description of all of the standards for certification of private applicators adopted by the State and a citation to the specific State laws and/or regulations demonstrating that the State has adopted such standards. Any additional categories or subcategories established by a State must be identified in the application for Agency approval of a State plan and the application must clearly describe the standards the State will use to determine if the applicator has the necessary competency.

(iii) If private applicator certification is based upon written examination, a description of the State's private applicator certification examination standards and an explanation of how those meet or exceed the standards prescribed by the Agency under § 171.103(a)(2).

(iv) If private applicator certification is based upon training, an explanation of how the quantity, content, and quality of the State's training program ensure that a private applicator demonstrates the level of competency required § 171.105 for private applicators, addressing, at the minimum, all of the following factors:

(A) The quantity of training required to become certified as a private applicator.

(B) The content that is covered by the training and how the State ensures that required content is covered.

(C) The process the State uses to approve training programs for private applicator certification.

(D) How the State ensures the ongoing quality of the training program for private applicator certification.

(4) The application for Agency approval of a State certification plan must contain satisfactory documentation that the State standards for the recertification of applicators of restricted use pesticides meet or exceed those standards prescribed by the Agency under § 171.107. Such

documentation must include a statement that the State has adopted its own standards that meet or exceed the standards for recertification prescribed by the Agency under § 171.107. The application for Agency approval of a State certification plan must include all of the following:

(i) A list and detailed description of all of the State standards for recertification of private and commercial applicators, including the elements described in § 171.303(b)(4)(ii) through (iv), and a citation of the specific State laws and/or regulations demonstrating that the State has adopted such standards.

(ii) The certification period, which may not exceed five years.

(iii) If recertification is based upon written examination, a description of the State's process for reviewing, and updating as necessary, the written examination(s) to ensure that the written examination(s) evaluates whether a certified applicator demonstrates the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators.

(iv) If recertification is based upon continuing education, an explanation of how the quantity, content, and quality of the State's continuing education program ensures that a certified applicator continues to demonstrate the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators, including but not limited to:

(A) The quantity of continuing education required to maintain certification.

(B) The content that is covered by the continuing education program and how the State ensures the required content is covered.

(C) The process the State uses to approve continuing education courses or events, including information about how the State ensures that any continuing education courses or events verify the applicator's successful completion of the course or event.

(D) How the State ensures the ongoing quality of the continuing education program.

(5) The application for Agency approval of a State certification plan must contain satisfactory documentation that the State standards for the direct supervision of noncertified applicators by certified private and commercial applicators of restricted use pesticides meet or exceed those standards prescribed by the Agency under § 171.201. Such documentation may include one or more of the following as applicable:

(i) A statement that the State has adopted the standards for direct supervision of noncertified applicators by certified private and/or commercial applicators prescribed by the Agency under § 171.201 and a citation of the specific State laws and/or regulations demonstrating that the State has adopted such standards.

(ii) A statement that the State prohibits noncertified applicators from using restricted use pesticides under the direct supervision of certified private and/or commercial applicators, and a citation of the specific State laws and/or regulations demonstrating that the State has adopted such a prohibition.

(iii) A statement that the State has adopted standards for direct supervision of noncertified applicators by certified private and/or commercial applicators that meet or exceed the standards prescribed by the Agency under § 171.201, a citation of the specific State laws and/or regulations demonstrating that the State has adopted such standards, and an explanation of how the State standards meet or exceed the standards prescribed by the Agency under § 171.201.

(6) The application for Agency approval of a State certification plan must include all of the following:

(i) A written statement by the Governor of the State designating a lead agency responsible for administering the State certification plan. The lead agency will serve as the central contact point for the Agency. The State certification plan must identify the primary point of contact at the lead agency responsible for administering the State certification plan and serving as the central contact for the Agency on any issues related to the State certification plan. In the event that more than one agency or organization will be responsible for performing functions under the State certification plan, the application for Agency approval of a State plan must identify all such agencies and organizations and list the functions to be performed by each, including compliance monitoring and enforcement responsibilities. The application for Agency approval of a State plan must indicate how these functions will be coordinated by the lead agency to ensure consistency of the administration of the State certification plan.

(ii) A written opinion from the State attorney general or from the legal counsel of the State lead agency that states that the lead agency and other cooperating agencies have the legal authority necessary to carry out the State certification plan.

(iii) A listing of the qualified personnel that the lead agency and any cooperating agencies or organizations have to carry out the State certification plan. The list must include the number of staff, job titles, and job functions of such personnel of the lead agency and any cooperating organizations.

(iv) A commitment by the State that the lead agency and any cooperators will ensure sufficient resources are available to carry out the applicator certification program as detailed in the State certification plan.

(v) A document outlining the State's proposed approach and anticipated timeframe for implementing the State certification plan after EPA approves the State certification plan.

(7) The application for Agency approval of a State certification plan must include a complete copy of all State laws and regulations relevant to the State certification plan. In addition, the application for Agency approval of a State plan must include citations to the specific State laws and regulations that demonstrate specific legal authority for each of the following:

(i) Provisions for and listing of the acts which would constitute grounds for denying, suspending, and revoking certification of applicators. Such grounds must include, at a minimum, misuse of a pesticide, falsification of any records required to be maintained by the certified applicator, a criminal conviction under section 14(b) of FIFRA, a final order imposing civil penalty under section 14(a) of FIFRA, and conclusion of a State enforcement action for violations of State laws or regulations relevant to the State certification plan.

(ii) Provisions for reviewing, and where appropriate, suspending or revoking an applicator's certification based on any of the grounds listed in the plan pursuant to paragraph (b)(7)(i) of this section, or a criminal conviction under section 14(b) of FIFRA, a final order imposing civil penalty under section 14(a) of FIFRA, or conclusion of a State enforcement action for violations of State laws or regulations relevant to the State certification plan.

(iii) Provisions for assessing criminal and civil penalties for violations of State laws or regulations relevant to the State certification plan.

(iv) Provisions for right of entry by consent or warrant by State officials at reasonable times for sampling, inspection, and observation purposes.

(v) Provisions making it unlawful for persons other than certified applicators or noncertified applicators working under a certified applicator's direct

supervision to use restricted use pesticides.

(vi) Provisions requiring certified commercial applicators to record and maintain for the period of at least two years routine operational records containing information on types, amounts, uses, dates, and places of application of restricted use pesticides and for ensuring that such records will be available to appropriate State officials. Such provisions must require commercial applicators to record and maintain, at a minimum, all of the following:

- (A) The name and address of the person for whom the restricted use pesticide was applied.
- (B) The location of the restricted use pesticide application.
- (C) The size of the area treated.
- (D) The crop, commodity, stored product, or site to which the restricted use pesticide was applied.
- (E) The time and date of the restricted use pesticide application.
- (F) The brand or product name of the restricted use pesticide applied.
- (G) The EPA registration number of the restricted use pesticide applied.
- (H) The total amount of the restricted use pesticide applied per location per application.
- (I) The name and certification number of the certified applicator that made or supervised the application, and, if applicable, the name of any noncertified applicator(s) that made the application under the direct supervision of the certified applicator.
- (J) Records required under § 171.201(e).

(vii) Provisions requiring restricted use pesticide retail dealers to record and maintain at each individual dealership, for the period of at least two years, records of each transaction where a restricted use pesticide is distributed or sold to any person, excluding transactions solely between persons who are pesticide producers, registrants, wholesalers, or retail sellers, acting only in those capacities. Records of each such transaction must include all of the following information:

(A) Name and address of the residence or principal place of business of each certified applicator to whom the restricted use pesticide was distributed or sold, or if applicable, the name and address of the residence or principal place of business of each noncertified person to whom the restricted use pesticide was distributed or sold for application by a certified applicator.

(B) The certification number on the certification document presented to the seller evidencing the valid certification of the certified applicator authorized to

purchase the restricted use pesticide, the State, Tribe or Federal agency that issued the certification document, the expiration date of the certified applicator's certification, and the category(ies) in which the applicator is certified relevant to the pesticide(s) sold.

(C) The product name and EPA registration number of the restricted use pesticide(s) distributed or sold in the transaction, including any applicable emergency exemption or State special local need registration number.

(D) The quantity of the restricted use pesticide(s) distributed or sold in the transaction.

(E) The date of the transaction.

(c) *Requirement to submit reports to the Agency.* The State must agree to submit the following reports to the Agency in a manner and containing the information that the Agency requires:

(1) An annual report to be submitted by the State lead agency to the Agency by the date established by the Agency that includes all of the following information:

(i) The number of new general private applicator certifications and recertifications issued during the last 12 month reporting period, and total number of applicators holding a valid general private applicator certification at the end of the last 12 month reporting period.

(ii) For each private applicator category specified in the certification plan, the numbers of new certifications and recertifications issued during the last 12 month reporting period, and the total number holding valid certifications in each category at the end of the last 12 month reporting period.

(iii) The numbers of new commercial applicator certifications and recertifications issued during the last 12 month reporting period, and the total number of applicators certified in at least one commercial applicator certification category at the end of the last 12 month reporting period.

(iv) For each commercial applicator certification category or subcategory specified in the certification plan, the numbers of new certifications and recertifications issued during the last 12 month reporting period, and the total number of commercial applicators holding a valid certification in each category or subcategory at the end of the last 12 month reporting period.

(v) A description of any modifications made to the approved certification plan during the last 12 month reporting period that have not been previously evaluated by the Agency under § 171.309(a)(3).

(vi) A description of any proposed changes to the certification plan that the State anticipates making during the next reporting period that may affect the certification program.

(vii) A summary of enforcement activities related to the use of restricted use pesticides during the last 12 month reporting period.

(2) Any other reports reasonably required by the Agency in its oversight of restricted use pesticides.

§ 171.305 Requirements for Federal agency certification plans.

(a) A Federal agency may certify applicators of restricted use pesticides only in accordance with a Federal agency certification plan approved by the Agency. Certification must be limited to the employees of the Federal agency covered by the certification plan and will be valid only for those uses of restricted use pesticides conducted in the performance of the employees' official duties.

(1) The Federal agency certification plan must include a full description of the proposed process the Federal agency will use to assess applicator competency to use or supervise the use of restricted use pesticides.

(2) Employees certified by the Federal agency must meet the standards for commercial applicators.

(3) The Federal agency certification plan must list and describe the categories of certification from the certification categories listed in § 171.101 that will be included in the plan except that:

(i) A Federal agency certification plan may omit any unneeded certification categories.

(ii) A Federal agency certification plan may designate subcategories within the categories described in § 171.101 as it deems necessary.

(iii) A Federal agency certification plan may include additional certification categories not covered by the existing Federal categories described in § 171.101.

(iv) A Federal agency certification plan may combine the categories described in § 171.101(m) through (n) into a single general fumigation category for commercial applicators.

(4) For each of the categories adopted pursuant to paragraph (b)(1) of this section, the Federal agency plan must include standards for the certification of applicators of restricted use pesticides that meet or exceed those standards prescribed by the Agency under §§ 171.101 through 171.103, except as provided at paragraph (a)(5) of this section.

(5) A Federal agency may adopt a limited use category for commercial

applicators. A limited use category covers a small number of applicators engaged in a use that does not clearly fit within any of the categories in § 171.101, and allows only the use of a limited set of restricted use pesticides by specific application methods. A Federal agency adopting a limited use category must include all of the following in its certification plan:

(i) A definition of the limited use category, specifying the restricted use pesticide(s), use sites, and specific application methods permitted.

(ii) An explanation of why it is not practical to include the limited use category in any of the categories in § 171.101.

(iii) A requirement that candidates for certification in a limited use category pass the written examination covering the core standards at § 171.103(c) and demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticide(s) covered by the limited use category.

(iv) Specific competency standards for the limited use category.

(v) The process by which applicators must demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides covered by the limited use category based on the competency standards identified in paragraph (a)(5)(iv) of this section. This does not have to be accomplished by a written examination.

(vi) A description of the recertification standards for the limited use category and how those standards meet or exceed the standards prescribed by the Agency under § 171.107.

(vii) A description of the limited use certification credential. The credential must clearly state that the applicator is only authorized to purchase and use the specific restricted use pesticide(s) identified in that credential.

(6) The Federal agency standards for certification examinations must meet or exceed the standards prescribed by the Agency under § 171.103(a)(2), including a description of any alternative identification that the Federal agency will authorize in addition to a valid, government-issued photo identification.

(7) The Federal agency standards for the recertification of applicators of restricted use pesticides must meet or exceed those standards prescribed by the Agency under § 171.107.

(8) The Federal agency standards for the direct supervision of noncertified applicators by certified private and commercial applicators of restricted use pesticides must meet or exceed those

standards prescribed by the Agency under § 171.201.

(9) The Federal agency certification plan must describe the credentials or documents the Federal agency will issue to each certified applicator verifying certification of applicators.

(10) A Federal agency may waive any or all of the procedures specified in § 171.103, § 171.105, and § 171.107 of this part when certifying applicators in reliance on valid current certifications issued by another State, Tribal, or Federal agency under an EPA-approved certification plan. The Federal agency certification plan must explain whether, and if so, under what circumstances, the Federal agency will certify applicators based in whole or in part on their holding a valid current certification issued by another State, Tribe or Federal agency. Such certifications are subject to all of the conditions listed at § 171.303(a)(9).

(b) *Contents of an application for EPA approval of a Federal agency plan for certification of applicators of restricted use pesticides.*

(1) The application for Agency approval of a Federal agency certification plan must list and describe the categories of certification.

(2) The application for Agency approval of a Federal agency certification plan must contain satisfactory documentation that the Federal agency standards for certification of commercial applicators meet or exceed those standards prescribed by the Agency under §§ 171.101 and 171.103. Such a statement must include one of the following:

(i) A statement that the Federal agency has adopted the same standards for certification prescribed by the Agency under §§ 171.101 through 171.103.

(ii) A statement that the Federal agency has adopted its own standards that meet or exceed the standards for certification prescribed by the Agency under §§ 171.101 through 171.103. If the Federal agency selects this option, the application for Agency approval of a Federal agency certification plan must include all of the following:

(A) A list and detailed description of all the categories and subcategories to be used for certification of commercial applicators.

(B) A list and detailed description of all of the standards for certification of commercial applicators adopted by the Federal agency. Any additional categories or subcategories established by a Federal agency must be included in the application for Agency approval of a Federal agency plan and must clearly

describe the standards the Federal agency will use to determine if the applicator has the necessary competency.

(C) A description of the Federal agency's certification examination standards and an explanation of how those meet or exceed the standards prescribed by the Agency under § 171.103(a)(2).

(3) The application for Agency approval of a Federal agency plan must contain satisfactory documentation that the Federal agency standards for recertification of commercial applicators of restricted use pesticides meet or exceed the standards for recertification prescribed by the Agency under § 171.107. Such documentation must include a statement that the Federal agency has adopted its own standards that meet or exceed the standards for recertification prescribed by the Agency under § 171.107. The application for Agency approval of a Federal agency certification plan must include all of the following:

(i) A list and detailed description of all the standards for recertification adopted by the Federal agency.

(ii) The certification period, which may not exceed five years.

(iii) If recertification is based upon written examination, a description of the Federal agency's process for reviewing, and updating as necessary, the written examination(s) and to ensure that the written examination(s) evaluate whether a commercial applicator demonstrates the level of competency required by § 171.103.

(iv) If recertification is based upon continuing education, an explanation of how the quantity, content and quality of the Federal agency's continuing education program ensure that a commercial applicator continues to demonstrate the level of competency required by § 171.103 for commercial applicators, including but not limited to, all of the following:

(A) The quantity of continuing education required to maintain certification.

(B) The content that is covered by the continuing education program and how the Federal agency ensures the relevant content is covered.

(C) The process the Federal agency uses to approve continuing education training courses or events, including information about how the Federal agency ensures that any continuing education courses or events verify the commercial applicator's successful completion of the course or event.

(D) How the Federal agency ensures the ongoing quality of the continuing education program.

(4) The application for Agency approval of a Federal agency certification plan must contain satisfactory documentation that the Federal agency standards for direct supervision of noncertified applicators by commercial applicators meet or exceed those standards prescribed by the Agency under § 171.201. Such documentation may include one or more of the following as applicable:

(i) A statement that the Federal agency has adopted the standards for direct supervision of noncertified applicators by commercial applicators prescribed by the Agency under § 171.201.

(ii) A statement that the Federal agency prohibits noncertified applicators from using restricted use pesticides under the direct supervision of commercial applicators.

(iii) A statement that the Federal agency has adopted standards for direct supervision of noncertified applicators by commercial applicators that meet or exceed the standards prescribed by the Agency under § 171.201 and an explanation of how the Federal agency standards meet or exceed the standards prescribed by the Agency under § 171.201.

(5) The application for Agency approval of a Federal agency certification plan must meet or exceed all of the applicable requirements in § 171.303. However, in place of the legal authorities required in § 171.303(b)(7), the Federal agency may use administrative controls inherent in the employer-employee relationship to accomplish the objectives of § 171.303(b)(7). The application for Agency approval of a Federal agency certification plan must include a detailed description of how the Federal agency will exercise its administrative authority, where appropriate to deny, suspend or revoke certificates of employees who misuse pesticides, falsify records, or violate relevant provisions of FIFRA. Similarly, the application for Agency approval of a Federal agency certification plan must include a commitment that the Federal agency will record and maintain for the period of at least two years routine operational records containing information on types, amounts, uses, dates, and places of application of restricted use pesticides and that such records will be available to State and Federal officials. Such recordkeeping requirements must require Federal agency employees certified as commercial applicators to record and maintain, at a minimum, all of the records specified in § 171.303(b)(7)(vi).

(c) The application for Agency approval of a Federal agency certification plan must include a commitment by the Federal agency to submit an annual report to the Agency in a manner that the Agency requires that includes all of the following information:

(1) The numbers of new, recertified, and total commercial applicators certified in at least one certification category at the end of the last 12 month reporting period.

(2) For each commercial applicator certification category specified in § 171.101 or subcategory specified in the Federal agency certification plan, the numbers of new, recertified and total commercial applicators holding a valid certification in each of those categories at the end of the last 12 month reporting period.

(3) A description of any modifications made to the approved certification plan during the last 12 month reporting period that have not been previously evaluated under § 171.309(a)(3).

(4) A description of any proposed changes to the certification plan that may affect the certification program that the Federal agency anticipates making during the next reporting period.

(5) A summary of enforcement activities related to use of restricted use pesticides by applicators certified by the Federal agency during the last 12 month reporting period.

(d) The application for Agency approval of a Federal agency certification plan must include a commitment by the Federal agency to submit any other reports reasonably required by the Agency in its oversight of the use of restricted use pesticides.

(e) If applicators certified under the Federal agency plan will make any applications of restricted use pesticides in areas that are not subject to exclusive federal jurisdiction, the application for Agency approval of a Federal agency certification plan must meet all of the following additional requirements:

(1) The Federal agency plan must have a provision that affirms Federal agency certified applicators will comply with all applicable State and Tribal pesticide laws and regulations of the jurisdiction in which the restricted pesticide is being used when using restricted use pesticides areas that are not subject to exclusive federal jurisdiction, including any substantive State or Tribal standards in regard to qualifications for commercial applicator certification that exceed the Federal agency's standards.

(2) The Federal agency plan must have a provision for the Federal agency to notify the appropriate EPA Regional

office and State or Tribal pesticide authority in the event of misuse or suspected misuse of a restricted use pesticide by a Federal agency employee and any pesticide exposure incident involving human or environmental harm that may have been caused by an application of a restricted use pesticide made by a Federal agency employee in an area not subject to exclusive federal jurisdiction.

(3) The Federal agency plan must have a provision for the Federal agency to cooperate with the Agency and the State or Tribal pesticide authority in any investigation or enforcement action undertaken in connection with an application of a restricted use pesticide made by a Federal agency employee in an area not subject to exclusive federal jurisdiction.

§ 171.307 Certification of applicators in Indian country.

All applicators of restricted use pesticides in Indian country must hold a certification valid in that area of Indian country, or be working under the direct supervision of a certified applicator whose certification is valid in that area of Indian country. An Indian Tribe may certify applicators of restricted use pesticides in Indian country only pursuant to a certification plan approved by the Agency that meets the requirements of paragraph (a) or (b) of this section. The Agency may implement a Federal certification plan, pursuant to paragraph (c) of this section and § 171.311, for an area of Indian country not covered by an approved plan.

(a) An Indian Tribe may choose to allow persons holding currently valid certifications issued under one or more specified State, Tribal, or Federal agency certification plans to use restricted use pesticides within the Tribe's Indian country.

(1) A certification plan under paragraph (a) of this section must consist of a written agreement between the Tribe and the relevant EPA Region(s) that contains all of the following information:

(i) A detailed map or legal description of the area(s) of Indian country covered by the plan.

(ii) A listing of the State(s), Tribe(s) or Federal agency(ies) upon whose certifications the Tribe will rely.

(iii) A description of any Tribal law, regulation, or code relating to application of restricted use pesticides in the covered area of Indian country, including a citation to each applicable Tribal law, regulation, or code.

(iv) A description of the procedures and relevant authorities for carrying out

compliance monitoring under and enforcement of the plan, including all of the following:

(A) A description of the Agency and Tribal roles and procedures for conducting inspections.

(B) A description of the Agency and Tribal roles and procedures for handling case development and enforcement actions and actions on certifications, including procedures for exchange of information.

(C) A description of the Agency and Tribal roles and procedures for handling complaint referrals.

(v) A description and copy of any separate agreements relevant to administering the certification plan and carrying out related compliance monitoring and enforcement activities. The description shall include a listing of all parties involved in each separate agreement and the respective roles, responsibilities, and relevant authorities of those parties.

(2) To the extent that an Indian Tribe is precluded from exercising criminal enforcement authority, the Federal government will exercise primary criminal enforcement authority in regard to a certification plan under paragraph (a) of this section. The Tribe and the relevant EPA Region(s) shall develop a procedure whereby the Tribe will provide potential investigative leads to EPA and/or other appropriate Federal agencies in an appropriate and timely manner. This procedure shall encompass, at a minimum, all circumstances in which the Tribe is precluded from exercising relevant criminal enforcement authority. This procedure shall be included as part of the agreement between the Tribe and relevant EPA Region(s) described in paragraph (a)(1) of this section.

(3) A plan for the certification of applicators under paragraph (a) of this section shall not be effective until the agreement between the Tribe and the relevant EPA Region(s) has been signed by the Tribe and the appropriate EPA Regional Administrator(s).

(b) An Indian Tribe may choose to develop its own certification plan for certifying private and commercial applicators to use or supervise the use of restricted use pesticides.

(1) A certification plan under paragraph (b) of this section shall consist of a written plan submitted by the Tribe to the Agency for approval that includes all of the following information:

(i) A detailed map or legal description of the area(s) of Indian country covered by the plan.

(ii) A demonstration that the plan meets all requirements of § 171.303

applicable to State plans, except that the Tribe's plan will not be required to meet the requirements of § 171.303(b)(6)(iii) with respect to provisions for criminal penalties, or any other requirement for assessing criminal penalties.

(2) To the extent that an Indian Tribe is precluded from exercising criminal enforcement authority, the Federal government will exercise primary criminal enforcement authority in regard to a certification plan under paragraph (b) of this section. The Tribe and the relevant EPA Region(s) shall develop a procedure whereby the Tribe will provide potential investigative leads to EPA and/or other appropriate Federal agencies in an appropriate and timely manner. This procedure shall encompass, at a minimum, all circumstances in which the Tribe is precluded from exercising relevant criminal enforcement authority and shall be described in a memorandum of agreement signed by the Tribe and the relevant EPA Regional Administrator(s).

(3) A plan for the certification of applicators under paragraph (b) of this section shall not be effective until the memorandum of agreement required under paragraph (b)(2) of this section has been signed by the Tribe and the relevant EPA Region(s) and the plan has been approved by the Agency.

(c) In any area of Indian country not covered by an approved certification plan, the Agency may, in consultation with the Tribe(s) affected, implement an EPA-administered certification plan under § 171.311 for certifying private and commercial applicators to use or supervise the use of restricted use pesticides.

(1) Prior to publishing a notice of a proposed EPA-administered certification plan for an area of Indian country in the **Federal Register** for review and comment under § 171.311(d)(3), the Agency shall notify the relevant Indian Tribe(s) of EPA's intent to propose the plan.

(2) The Agency will not implement an EPA-administered certification plan for any area of Indian country where, prior to the expiration of the notice and comment period provided under § 171.311(d)(3), the chairperson or equivalent elected leader of the relevant Tribe provides the Agency with a written statement of the Tribe's position that the plan should not be implemented.

§ 171.309 Modification and withdrawal of approval of certification plans.

(a) *Modifications to approved certification plans.* A State, Tribe, or Federal agency may make modifications to its approved certification plan,

provided that all of the following conditions are met:

(1) *Determination of plan compliance.* Before modifying an approved certification plan, the State, Tribe, or Federal agency must determine that the proposed modifications will not impair the certification plan's compliance with the requirements of this part or any other Federal laws or regulations.

(2) *Requirement for Agency notification.* The State, Tribe, or Federal agency must notify the Agency of any plan modifications within 90 days after the final State, Tribal, or Federal agency plan modifications become effective or when it submits its required annual report to the Agency, whichever occurs first.

(3) *Additional requirements for substantial modifications to approved certification plans.* Before making any substantial modifications to an approved certification plan, the State, Tribe or Federal agency must consult with the Agency and obtain Agency approval of the proposed modifications. Substantial modifications include the following:

(i) Addition or deletion of a mechanism for certification and/or recertification.

(ii) Establishment of a new private applicator category, private applicator subcategory, commercial applicator category, or commercial applicator subcategory.

(iii) Any other changes that the Agency has notified the State, Tribal or Federal agency that the Agency considers to be substantial modifications.

(4) *Agency decision.* The Agency shall make a written determination regarding the modified certification plan's compliance with the requirements of this part. The Agency shall give the certifying authority submitting a certification plan notice and opportunity for an informal hearing before rejecting the plan. The Agency's approval may be subject to reasonable terms and conditions. If the Agency approves modifications to a certification plan, that approval shall specify a schedule for implementation of the modified certification plan.

(b) *Withdrawal of approval.* If at any time the Agency determines that a State, Tribal, or Federal agency certification plan does not comply with the requirements of this part or any other Federal laws or regulations, or that a State, Tribal, or Federal agency is not administering the certification plan as approved under this part, or that a State is not carrying out a program adequate to ensure compliance with FIFRA section 19(f), the Agency may withdraw

approval of the certification plan. Before withdrawing approval of a certification plan, the Agency will notify the State, Tribal, or Federal agency and provide the opportunity for an informal hearing. If appropriate, the Agency may allow the State, Tribe, or Federal agency a reasonable time, not to exceed 90 days, to take corrective action.

§ 171.311 EPA-administered applicator certification programs.

(a) *Applicability.* This section applies in any State or area of Indian country where there is no approved State or Tribal certification plan in effect.

(b) *Certification requirement.* In any State or area of Indian country where EPA administers a certification plan, any person who uses or supervises the use of any restricted use pesticide must meet one of the following criteria:

(1) A commercial applicator must be certified in each category and subcategory, if any, as described in the EPA-administered plan, for which the applicator is applying or supervising the application of restricted use pesticides.

(2) A private applicator must be certified in each category and subcategory, if any, as described in the EPA-administered plan, for which the applicator is applying or supervising the application of restricted use pesticides.

(3) A noncertified applicator may only use a restricted use pesticide under the direct supervision of an applicator certified under the EPA-administered plan, in accordance with the requirements in § 171.201, and only for uses in categories authorized by that certified applicator's certification.

(c) *Implementation of EPA-administered plans in States.*

(1) In any State where this section is applicable, the Agency, in consultation with the Governor, may implement an EPA-administered plan for the certification of applicators of restricted use pesticides.

(2) Such a plan will meet the applicable requirements of § 171.303. Prior to the implementation of the plan, the Agency will publish in the **Federal Register** for review and comment a summary of the proposed EPA-administered plan for the certification of applicators and will generally make available copies of the proposed plan within the State. The summary will include all of the following:

(i) An outline of the proposed procedures and requirements for private and commercial applicator certification and recertification.

(ii) A description of the proposed categories and subcategories for certification.

(iii) A description of any proposed conditions for the recognition of State, Tribal, or Federal agency certifications.

(iv) An outline of the proposed arrangements for coordination and communication between the Agency and the State regarding applicator certifications and pesticide compliance monitoring and enforcement.

(d) *Implementation of EPA-administered plans in Indian country.*

(1) In any area of Indian country where this section is applicable and consistent with the provisions of § 171.307(c), the Agency, in consultation with the appropriate Indian Tribe(s), may implement a plan for the certification of applicators of restricted use pesticides.

(2) An EPA-administered plan may be implemented in the Indian country of an individual Tribe or multiple Tribes located within a specified geographic area.

(3) Such a plan will meet the applicable requirements of § 171.303 and § 171.307(c). Prior to the implementation of the plan, the Agency will publish in the **Federal Register** for review and comment a summary of the proposed EPA-administered plan for the certification of applicators and will generally make available copies of the proposed plan within the area(s) of Indian country to be covered by the proposed plan. The summary will include all of the following:

(i) A description of the area(s) of Indian country to be covered by the proposed plan.

(ii) An outline of the proposed procedures and requirements for private and commercial applicator certification and recertification.

(iii) A description of the proposed categories and subcategories for certification.

(iv) A description of any proposed conditions for the recognition of State, Tribal, or Federal agency certifications.

(v) An outline of the proposed arrangements for coordination and communication between the Agency and the relevant Tribe(s) regarding applicator certifications and pesticide compliance monitoring and enforcement.

(e) *Denial, suspension, modification, or revocation of a certification.*

(1) The Agency may suspend all or part of a certified applicator's certification issued under an EPA-administered plan or, after opportunity for a hearing, may deny issuance of, or revoke or modify, an applicator's certification issued under an EPA-administered plan, if the Agency finds that the applicator has been convicted under FIFRA section 14(b), has been

subject to a final order imposing a civil penalty under FIFRA section 14(a), or has committed any of the following acts:

(i) Used any registered pesticide in a manner inconsistent with its labeling.

(ii) Made available for use, or used, any registered pesticide classified for restricted use other than in accordance with FIFRA section 3(d) and any regulations promulgated thereunder.

(iii) Refused to keep and maintain any records required pursuant to this section.

(iv) Made false or fraudulent records, invoices or reports.

(v) Failed to comply with any limitations or restrictions on a valid current certificate.

(vi) Violated any other provision of FIFRA and the regulations promulgated thereunder.

(vii) Allowed a noncertified applicator to use a restricted use pesticide in a manner inconsistent with the requirements in § 171.201.

(viii) Violated any provision of a State, Tribal or Federal agency certification plan or its associated laws or regulations.

(2) If the Agency intends to deny, revoke, or modify an applicator's certification, the Agency will:

(i) Notify the applicator of all of the following:

(A) The legal and factual ground(s) upon which the denial, revocation, or modification is based.

(B) The time period during which the denial, revocation or modification is effective, whether permanent or otherwise.

(C) The conditions, if any, under which the applicator may become certified or recertified.

(D) Any additional conditions the Agency may impose.

(ii) Provide the applicator an opportunity to request an informal hearing prior to final Agency action to deny, revoke or modify the certification, and the opportunity to offer written statements of facts, explanations, comments, and arguments relevant to the proposed action.

(3) If a hearing is requested by an applicator pursuant to paragraph (e)(2)(ii) of this section, the Agency will appoint an attorney in the Agency as Presiding Officer to conduct an informal hearing. No person shall serve as Presiding Officer if he or she has had any prior connection with the specific case.

(4) The Presiding Officer appointed pursuant to paragraph (e)(3) of this section shall do all of the following:

(i) Conduct a fair, orderly and impartial hearing, without unnecessary delay.

(ii) Provide such procedural opportunities as the Presiding Officer may deem necessary to a fair and impartial hearing.

(iii) Consider all relevant evidence, explanation, comment and argument properly submitted.

(iii) Promptly notify the parties of the final decision and order. Such an order is a final Agency action subject to judicial review in accordance with FIFRA section 16.

(5) If the Agency determines that the public health, interest or welfare warrants immediate action to suspend the certified applicator's certification during the course of the procedures specified in paragraphs (e)(2) through (e)(4) of this section, the Agency will do all of the following:

(i) Notify the certified applicator of the ground(s) upon which the suspension action is based.

(ii) Notify the certified applicator of the time period during which the suspension is effective.

(iii) Notify the certified applicator of the Agency's intent to revoke or modify the certification, as appropriate, in accord with paragraph (e)(2) of this section. If such revocation or modification notice has not previously been issued, it must be issued at the same time the suspension notice is issued.

(6) In cases where the act constituting grounds for suspension of a certification is neither willful nor contrary to the public interest, health, or safety, the certified applicator may have additional procedural rights under 5 U.S.C. 558(c).

(7) Any notice, decision or order issued by the Agency under paragraph (e) of this section, and any documents and information considered by the Presiding Officer in issuing an order under paragraph (e)(4)(iv) of this section, shall be available to the public except as otherwise provided by FIFRA section 10 or by 40 CFR part 2. Any hearing at which oral testimony is presented shall be open to the public, except that the Presiding Officer may

exclude the public to the extent necessary to allow presentation of information that may be entitled to confidentiality under FIFRA section 10 or under 40 CFR part 2.

(f) *Restricted use pesticide retail dealer reporting and recordkeeping requirements, availability of records, and failure to comply.*

(1) *Reporting requirements.* Each restricted use pesticide retail dealer in a State or area of Indian country where the Agency implements an EPA-administered plan must do both of the following:

(i) Report to the Agency the business name by which the restricted use pesticide retail dealer operates and the name and business address of each of his or her dealerships. This report must be submitted to the appropriate EPA Regional office no later than 60 days after the EPA-administered plan becomes effective or 60 days after the date the person becomes a restricted use pesticide retail dealer in an area where an EPA-administered plan is in effect, whichever occurs later.

(ii) Submit revisions to the initial report to the appropriate EPA Regional office reflecting any name changes, additions or deletions of dealerships. Revisions must be submitted to the appropriate EPA Regional office within 10 days of the occurrence of such change, addition or deletion.

(2) *Recordkeeping requirement.* A restricted use pesticide retail dealer is required to create and maintain records of each sale of restricted use pesticides to any person, excluding transactions solely between persons who are pesticide producers, registrants, wholesalers, or retail sellers, acting only in those capacities. Each restricted use pesticide retail dealer must maintain at each individual dealership records of each transaction where a restricted use pesticide is distributed or sold by that dealership to any person. Records of each such transaction must be maintained for a period of two years after the date of the transaction and

must include all of the following information:

(i) Name and address of the residence or principal place of business of each certified applicator to whom the restricted use pesticide was distributed or sold, or if applicable, the name and address of the residence or principal place of business of each noncertified person to whom the restricted use pesticide was distributed or sold, for application by a certified applicator.

(ii) The certification number on the certification document presented to the seller evidencing the valid certification of the certified applicator authorized to purchase the restricted use pesticide, the State, Tribe or Federal agency that issued the certification document, the expiration date of the certified applicator's certification, and the category(ies) in which the certified applicator is certified relevant to the pesticide(s) sold.

(iii) The product name and EPA registration number of the restricted use pesticide(s) distributed or sold in the transaction, including any emergency exemption or State special local need registration number, if applicable.

(iv) The quantity of the restricted use pesticide(s) distributed or sold in the transaction.

(v) The date of the transaction.

(3) *Availability of required records.* Each restricted use pesticide retail dealer must, upon request of any authorized officer or employee of the Agency, or other authorized agent or person duly designated by the Agency, furnish or permit such person at all reasonable times to have access to and copy all records required to be maintained under this section.

(4) *Failure to comply.* Any person who fails to comply with the provisions of this section may be subject to civil or criminal sanctions, under FIFRA section 14, or 18 U.S.C. 1001.

[FR Doc. 2016-30332 Filed 1-3-17; 8:45 am]

BILLING CODE 6560-50-P