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40 CFR Part 171

Pesticides; Certification of Pesticide Applicators; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 171

[EPA-HQ-OPP-2011-0183; FRL-9931-83]

RIN 2070-AJ20

Pesticides; Certification of Pesticide Applicators

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing changes to the existing regulation concerning the certification of applicators of restricted use pesticides (RUPs) in response to extensive stakeholder review of the regulation and its implementation since 1974. EPA's proposed changes would ensure the Federal certification program standards adequately protect applicators, the public, and the environment from risks associated with use of RUPs. The proposed changes are intended to improve the competency of certified applicators of RUPs, increase protection for noncertified applicators of RUPs operating 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. In keeping with EPA's commitment to work more closely with Tribal governments to strengthen environmental protection in Indian country, certain changes are intended to provide more practical options for establishing certification programs in Indian country.

DATES: Comments must be received on or before November 23, 2015.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA-HQ-OPP-2011-0183, by one of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC) (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460-0001. In addition, please mail a copy of your comments on the information collection provisions to the Office of Information and Regulatory Affairs, Office of Management and Budget, ATTN: Desk

Officer for EPA, 725 17th St. NW., Washington, DC 20503.

- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at <http://www.epa.gov/dockets/contacts.html>.

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at <http://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT: Michelle Arling, Field and External Affairs Division (7506P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460; telephone number: (703) 308-5891; email address: arling.michelle@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Executive Summary

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: Certified by a State, Tribe, or Federal agency to apply pesticides; a State, Tribal, or Federal agency who administers a certification program for pesticide 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 rulemaking 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 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.

C. What action is the Agency taking?

The proposed rule would revise the existing Certification of Pesticide Applicators (certification) rule at 40 CFR part 171 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, and Federal agency certification plans. The proposed rule would revise the existing certification rule at 40 CFR part 171 to add: Application method-specific categories of certification for commercial and private applicators, predator control categories for commercial and private applicators, recertification standards and interval, and minimum age for certified applicators and noncertified applicators working under direct supervision.

1. *Private applicator competency standards.* The proposed rule would clarify the standards of competency a private applicator must meet in order to be certified. The proposed rule would expand the private applicator competency standards to include 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 Worker Protection Standard (WPS) (40 CFR part 170). The proposed rule also would amend 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.

2. *Application method-specific categories of certification for commercial and private applicators.* The proposed rule would require that commercial and private applicators who apply pesticides aerially or by fumigation demonstrate competency to make these types of applications. The proposal would add categories for aerial

application, soil fumigation, and non-soil fumigation.

3. *Recertification standards and interval.* The proposed rule would require that commercial and private applicators demonstrate continued competency to use RUPs every 3 years by either passing written exams for each certification they hold or completing specific training in a continuing education program administered by the certifying authority. Commercial applicators would be required to demonstrate continued competency in the core standards and each category in which they intend to maintain their certification. Private applicators would be required to demonstrate continued general competency and competency in each relevant application method-specific category in which they intend to maintain their certification.

4. *Standards for noncertified applicators working under the direct supervision.* The proposed rule would include several new requirements to ensure that noncertified applicators are competent to use RUPs under the supervision of a certified applicator. In order for noncertified applicators to work under the direct supervision of a certified applicator they would have to complete specific training as outlined in the proposed rule, complete training required for handlers under the WPS, or pass the exam covering general standards of competency for commercial pesticide applicators ("core exam"). Noncertified applicators who qualify by satisfying the training requirement under the proposed rule or the training required for handlers under the WPS would be required to renew their qualification after a year; noncertified applicators who qualify by passing the core exam would need to renew their qualification after 3 years. Noncertified applicators can renew their qualifications using any of these same options. All applicators would be required to ensure noncertified applicators have met these qualifications and commercial applicators would be required to maintain records of the noncertified applicators' qualifications. The proposal would require a certified applicator supervising noncertified applicators to be certified in each category in which he or she supervises applications, to provide to the noncertified applicators 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.

5. *Minimum age.* The proposed rule would require commercial and private

applicators to be at least 18 years old and noncertified applicators using RUPs under the direct supervision of certified applicators to be at least 18 years old.

6. *Indian country certification.* The proposed rule would offer 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 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. EPA currently administers a Federal certification program covering Indian country not otherwise covered by a certification plan (Ref. 1) as well as a certification program specifically for Navajo Indian country (Ref. 2).

7. *State, Tribal, and Federal agency certification plans.* The proposed rule would update the requirements for submission, approval, and maintenance of State, Tribal, and Federal agency certification plans. The proposed rule would delete the section on Government Agency Plans (GAP) and would codify existing policy on review and approval of Federal agency certification plans.

D. Why is the Agency taking this action?

The Agency is proposing revisions to the existing certification regulation at 40 CFR part 171 in order to reduce occupational pesticide exposure and the incidence of related illness among certified applicators, noncertified applicators working under their direct supervision, and agricultural workers, and to ensure that when used according to their labeling, RUPs do not cause unreasonable adverse effects to applicators, workers, the public, or the environment. Discussions with State regulatory partners and key stakeholders over many years, together with EPA's review of incident data, have led EPA to identify several shortcomings in the current regulation that should be addressed, including:

- Absence of a minimum age for certified pesticide applicators and noncertified applicators working under their direct supervision.
- Absence of standards or a time period for ensuring that certified pesticide applicators maintain continued competency.
- Lack of certification standards for specific types of pesticide application (aerial and fumigation) that may pose risks to applicators, bystanders, and the environment if not performed correctly.

- Vague standards for evaluating the competency of private applicators to use RUPs.

- Incomplete protections for persons applying pesticides under the direct supervision of a certified applicator.

- Inconsistent national program for applicator certification that hinders applicators' ability to work in different states without duplicative burden and inhibits EPA's ability to develop certification and training materials that can be used nationally.

- Limited options for establishing applicator certification programs in Indian country.

- Incomplete information incorporated into the regulation about certification of applicators by Federal agencies.

A detailed discussion about the rationale for the proposed rule and EPA's regulatory objectives are provided in Units III. and VI. through XX. The proposed changes would offer targeted improvements that are reasonably expected to reduce risk to applicators, workers, the public, and the environment and improve applicator certification programs' operational efficiencies. EPA expects the proposed changes would:

- Improve competency of private and commercial applicators and noncertified applicators using RUPs under their direct supervision.

- Provide more uniform competency among certified applicators across the nation, thereby assuring the effectiveness of restricted use registration as a risk management tool.

- Protect applicators, workers, the public, and the environment from unreasonable adverse effects from the use of RUPs.

- Ensure that applicators are competent to use high-risk application methods.

- Ensure applicators' ongoing competency to use RUPs.

- Protect children by establishing a minimum age for commercial, private, and noncertified applicators.

- Improve human health and environmental protection in Indian country.

- Clarify and streamline requirements for States, Tribes, and Federal agencies to administer their own certification programs.

E. What are the estimated impacts of this action?

EPA has prepared an economic analysis (EA) of the potential costs and impacts associated with this rulemaking (Ref. 3). This analysis, which is available in the docket, is discussed in more detail in Unit III., and is briefly

summarized here. The following chart provides a brief outline of the costs and impacts of this proposed rule.

Category	Description	Source
Monetized Benefits Avoided acute pesticide incidents.	\$80.5 million/year after adjustment for underreporting of pesticide incidents ...	EA Chapter 6.5.
Qualitative Benefits	Willingness to pay to avoid acute effects of pesticide exposure beyond cost of treatment and loss of productivity. <ul style="list-style-type: none"> • 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. 	EA Chapter 6.4 & 6.6.
Total Costs	\$47.2 million/year	EA Chapter 5.
Costs to Private Applicators	490,000 impacted; \$19.5 million/year; average \$40 per applicator	EA Chapter 5 & 5.6.
Costs to Commercial Applicators	414,000 impacted; \$27.4 million/year; average \$66 per applicator	EA Chapter 5 & 5.6.
Costs to States and Other Jurisdictions.	63 impacted; \$359,000/year	EA Chapter 5.
Small Business Impacts	No significant impact on a substantial number of small entities	EA Chapter 5.7.
	<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 restricted use pesticides. • Impact less than 0.1% of the annual revenues for the average small entity. 	
Impact on Jobs	The rule will have a negligible effect on jobs and employment	EA Chapter 5.6.
	<ul style="list-style-type: none"> • Most private and commercial applicators are self-employed. • Incremental cost per applicator represents from 0.3 to 0.5 percent of the cost of a part-time employee. 	

II. Background

A. Regulatory Framework

This unit discusses the legal framework within which EPA regulates the safety of those who apply RUPs as certified applicators and noncertified applicators working under the direct supervision of certified applicators, as well as of the general public and the environment.

1. *FIFRA*. 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, an 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. Administrator, 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. Unclassified and general use 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 unclassified and general use pesticides without special permits or restrictions.

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, or particular uses of 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 effect 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 RUP require additional controls to ensure that when used they do not cause unreasonable adverse effects on human health or the environment. However, RUPs can be used safely when labeling instructions are followed. These products may only be applied by certified applicators or persons working under their direct supervision who have demonstrated competency in the safe application of pesticides, including the ability to read and understand the complex labeling requirements. 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 submitted to and 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 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 instructs 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 in other areas of the pesticide program 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 PestWise Web page on the EPA Web site at: <http://www.epa.gov/pest/about/index.html>.

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 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 section 2(e)(4)'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. 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. Pesticide registration. 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 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. The Agency considers the risk assessments and results of any peer review, and evaluates potential risk management measures that could mitigate risks 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 decision-making 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 the regulation of pesticides 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 as 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 when used according to the labeling directions and without additional restrictions. 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 (<http://www.epa.gov/opprd001/rup/>). EPA has classified about 900 pesticide products as RUPs, which is about 5% of all registered pesticide products. EPA does not have data on the relative usage of RUPs versus general use or unclassified pesticides.

When EPA approves a pesticide, the labeling reflects the risk mitigation measures required by EPA. The 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 rate or maximum number of applications; or limiting the use of the product to certified applicators (*i.e.*, prohibit application of an RUP by a noncertified applicator working under the direct supervision of a certified applicator) to protect users, the public, and the environment against risks associated with misapplication by unqualified or incompetent applicators. 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.

3. Pesticide Reregistration and Registration Review. 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 rule making, 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. 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. 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; imposing other application restrictions; classifying a product or specific use(s) as for restricted use; requiring the use of specific personal protective equipment (PPE); and establishing specific restricted entry intervals; and improving use directions.

Under the registration review program, EPA will review each registered pesticide at least every 15 years to determine whether it continues to meet the FIFRA standard for registration. Pesticides registered before 1984 were reevaluated initially under the reregistration program. These pesticides also are subject to registration review.

Rigorous ongoing education and enforcement are needed to ensure that these mitigation measures are appropriately implemented in the field. The framework provided by the pesticide applicator certification regulation and associated training 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 being proposed are designed to enhance the effectiveness of the existing 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 risks. EPA implements the risk reduction and mitigation measures that result from the pesticide reregistration and registration review programs through individual pesticide product labeling.

4. *Related rulemaking.* EPA also issued proposed amendments to the WPS (Ref. 4). Since 40 CFR parts 170 and 171, along with other components of the pesticide program, work together to reduce and prevent unreasonable adverse effects from pesticides, EPA's experience with the proposed amendments to 40 CFR part 170 significantly informs its effort to amend the current certification rule at 40 CFR part 171.

B. Overview of Certified Applicator Information

1. *Existing Certification of Pesticide Applicators Rule.* The certification regulation 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 current certification regulation establishes requirements for submission and approval of State plans for the certification of applicators. Consistent with the provisions of FIFRA section 11(a)(2) and the State plan requirements in the current rule, programs for the certification of applicators of RUPs are currently implemented by each of the fifty States. The certification programs are conducted by the States and Tribes in accordance with their State or Tribal certification plans, which are approved by the EPA Administrator and filed with EPA after approval. (Ref. 5) In some cases, certification programs are also carried out by other Federal agencies under approved Federal agency plans or by EPA under EPA-administered plans. In addition to the 50 State-implemented plans, EPA has approved plans for 3 territories, 4 Federal agencies, and 4 Tribes. EPA also directly administers a national certification plan for Indian country (Ref. 1) and has implemented a specific certification plan for the Navajo Nation (Ref. 2). 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* will have the same meaning in this proposed rulemaking.

The current certification regulation 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 current 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: EPA and other certifying authorities may sometimes refer to 11 categories of

certification if the two subcategories under agricultural pest control are counted 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. 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 current 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 current rule does not have a requirement for 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 “continuing education units,” 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 current certification regulation, 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.

An overview of the development of the certification rule and the process leading to this proposal appear in Unit IV.

2. Applicator demographics. The profile of certified applicators of RUPs has shifted over time. The U.S. is moving 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. 6). In 2013, the total number of certified applicators decreased to just over 900,000 (Ref. 5). 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%.

Applicators work in a diverse array of situations including agricultural production, residential pest control, mosquito spraying for public health protection, 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 original 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. 7).

3. Incident data and general information.

i. Incident Databases. 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. 8). 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 directly to EPA. FIFRA allows the aggregation of individual events in some circumstances, meaning an incident with negative impacts to a number of individuals (persons, livestock, birds, pollinators) and/or the environment 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 pesticide in water. EPA uses 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, the Sentinel Event Notification System for Occupational Risk (SENSOR), is 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 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:

- U.S. Department of Labor (DOL) workers’ compensation claims when reported by physicians.
- State Departments of Agriculture.
- Poison control centers.

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 (TESS). NPDS is a computerized information system with geographically-specific and near real-time reporting. While the main mission of Poison Control Centers (PCC) 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 retained 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 occupational incident data. Additionally, NPDS does not capture EPA pesticide registration numbers, a critical element for identifying the specific product and whether it was an RUP.

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. 9, 10 and 11). 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. The demographics of the populations that typically work with or around pesticides also contribute to underreporting of incidents. 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. A more complete discussion of the underreporting and its effect on pesticide incident reporting is located in the Economic Analysis for this proposal (Ref. 3).

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 safely 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 faulty application equipment (Ref. 12). Generally, reports on the data note that many of the 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. 12).

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 (Ref. 1).

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 proposed in this rulemaking.

III. Rationale and Objectives for This Action

A. Reasons for the Proposed Action

Broadly defined, a pesticide is any agent used to kill or control undesired insects, weeds, rodents, fungi, bacteria, or other organisms. 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, 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 may pose unreasonable adverse effects to human health or the environment without strict adherence to precise and often complex mitigation measures specified on the pesticide labeling—EPA classifies these products as restricted use. To ensure that the necessary measures are followed, EPA requires an additional level of precaution—these pesticides may be applied only by applicators who are certified or by noncertified applicators working under the direct supervision of a certified applicator. Certification serves to ensure competency of applicators to use these restricted products, 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 regulation, which sets standards for applicators using RUPs, is 40 years old and has not been updated significantly since it was finalized. In conjunction with various non-regulatory programs, the certification regulation requirements are intended to reduce unreasonable adverse effects from application of RUPs to applicators, bystanders, the public, and the environment. The certification regulation provisions are meant to:

- 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, territories, 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.

Within these five areas, EPA evaluated the costs and benefits of alternative requirements and is proposing a set of requirements that, in combination, is expected to achieve substantial benefits at minimum cost.

The certification regulation 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 current 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.

1. *The changing nature of pesticide labeling.* As discussed above, 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, labeling for pesticides changes with some frequency to incorporate risk mitigation measures that allow the pesticide to continue to be used safely. 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. In addition, EPA conducts risk assessments that result in 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 harm 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 safely. 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. The more frequently applicators receive training, the more likely they are to retain the substance of the training and apply it on the job. Studies show that information retained from training sessions declines significantly within a year (Refs. 14 and 15). 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 proposing changes to the regulation that would establish a certification period and standards for applicator recertification.

2. *Risks associated with specific application methods.* RUPs are applied using a variety of application methods. Some methods of application may pose a higher risk to the applicator, bystander, and the environment if not performed correctly. Spray applications, particularly spraying pesticides from an aircraft, may result in off-target drift of the pesticide. For example, a recent 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. 16). EPA also recognized risks associated with performing soil fumigation in the 2008 REDs for soil fumigants (Ref. 17). As a result of these risks, EPA required additional training for soil fumigant applicators through labeling amendments on top of the existing requirement for the applicator to be certified. The decision 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 perform specific types of applications that may pose higher risks if not performed correctly. Therefore, EPA is proposing changes to the regulation to require applicators to demonstrate competency to apply RUPs using specific application methods.

3. *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, such as the need to protect pollinators. The regulation needs to be updated 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. 5), 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 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 human health effects for hundreds of homeowners and children, and a clean-up cost of millions of dollars (Refs. 18 and 19). 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 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). Finally, several severe health incidents have resulted from the public getting access to RUPs that have been put into different containers, e.g., transferred to a soda bottle or a sandwich bag, that do not have the necessary labeling (Ref. 3).

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 by the proposed changes to the certification rule (Ref. 3). See the economic assessment for this rule for more information on human health and ecological incidents stemming from RUP use (Ref. 3).

In light of the incidents discussed above, EPA has determined to update 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 follow all labeling instructions. When labeling instructions are followed, RUPs can be used safely. EPA expects the proposed rule to reduce human health and

environmental incidents related to RUP use by strengthening the standards of competency for certified applicators, improving training for noncertified applicators, and establishing a maximum certification period and standards for recertification training. These changes would ensure that applicators and those under their supervision more carefully follow pesticide label instructions, take proper care to prevent harm, and generally have a higher level of competency.

4. Inadequate protection for noncertified applicators of RUPs. Noncertified applicators using RUPs receive little 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 and are protected under the certification rule. These noncertified applicators must be 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. 3). 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). Agricultural handlers also must be provided a copy of the labeling and any

other information necessary to make the application without causing unreasonable adverse effects. EPA is proposing additional content under the WPS 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. 4).

Like agricultural handlers, some noncertified applicators may face challenges, such as not speaking or reading English. They may bear risks from occupational pesticide exposure because they work with and around pesticides on a daily basis, and language and literacy barriers may make effective training and hazard communication challenging. 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 proposes to strengthen the standards for noncertified applicators to include relevant provisions from the proposed agricultural handler training under the 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.

5. 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. Two areas of the rule related to assessing applicator competency lack specificity sufficient to ensure the minimum level of competency: Standards for exams and private applicator competency standards. The lack of specificity in the 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.

In 2007, EPA issued guidance on its interpretation of exams in the rule. The guidance notes that EPA interprets any exam administered to gauge applicator competency as being a proctored, closed-book, written exam. EPA has become aware, however, that not all State certification programs reflect this interpretation; several States have certification processes that allow open-book, written exams for determining applicator competency. EPA is concerned that open-book exams allow a lower standard for the process of determining and assuring competency than intended when EPA established the requirement for exams in the regulation. EPA proposes to codify the 2007 guidance and to clarify its expectations regarding administration of certification exams and training programs to ensure that the process for determining competence meets a standard national baseline.

The 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 competency in core 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 in specific categories of application. Private and commercial applicators have access to the same RUPs and EPA expects that they have the same level of competency. 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 problem, EPA proposes to make the standards of competency for private applicators more specific—the proposed standards include many concepts from the commercial core standards as well as competencies necessary to use RUPs in agricultural production.

6. *Outdated and obsolete rule provisions.* The certification rule has

one section regarding Tribal programs that is outdated and one section on government agency certification programs that is not necessary. The current rule provides three options for applicator certification programs in Indian country. Consultation with Tribes raised an issue with one of the current 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 proposes to revise 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 would 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 would address appropriate implementation and enforcement issues.

The current rule includes a provision for a GAP, 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 RUP applicators. Four Federal agencies have EPA-approved certification plans. To streamline the rule and codify the existing policy, EPA proposes to delete the current section on GAP and replace it with requirements from the existing policy on Federal agency certification plans.

B. Regulatory Objectives

Through this proposal EPA seeks to have those responsible for making pesticide use decisions and applying RUPs and those who benefit from the availability of these products to internalize the effects of their decisions. By strengthening certification standards, adding categories for application methods that present high risk of exposure, establishing recertification standards, and requiring specific training for noncertified applicators, EPA proposes to put the responsibility to ensure that RUPs are used in a manner to avoid unreasonable adverse effects on the parties who are most able

to control the situation. This would minimize the externalities, undesirable or unintended consequences of decisions that result in negative consequences for other parties, in this case bystanders, the public, and the environment.

EPA estimates the total annualized cost of the rule at \$47.2 million (Ref. 3). States and other jurisdictions that administer certification programs would bear annualized costs of about \$359,000, but States would incur most of these costs immediately after the rule is finalized to modify their programs to correspond with the proposed changes to the Federal regulation. The annual cost to private applicators would be about \$19.5 million, or about \$40 per year per private applicator. The estimated annual cost to commercial applicators would be \$27.4 million, or about \$66 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 proposed rule would not have a substantial effect on employment.

The rule changes proposed by EPA would 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 certified applicators possess critical information on a wide range of environmental issues such as endangered species, water quality, worker protection, and protecting non-target organisms, such as pollinators. Pesticide safety education helps applicators improve their abilities to avoid pesticide misuse, spills and harm to non-target organisms.

The benefits of the proposed rule accrue to certified and noncertified applicators, the public, and the environment. EPA estimates the quantified value of the 638 to 762 acute illnesses from RUP exposure per year that could be prevented by the rule to be between \$20.1 million and \$20.5 million per year (Ref. 3). However, EPA

recognizes that the 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 75% (Refs. 9, 10 and 11). If only 25% of pesticide poisonings are reported, the quantified estimated benefits of the rule would be about \$80.5 million annually (Ref. 3).

EPA's approach to estimating the quantitative benefits of the proposal 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. Undertrained and under qualified 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 to increase the safety 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 assessment for this proposal for a discussion of the peer-reviewed literature (Ref. 3). The proposals for strengthened competency standards for private applicators, expanded training

for noncertified applicators, additional application method-specific certification categories, a minimum age for all persons using RUPs, and appropriate certification options in Indian country would lead to an overall reduction in the number of human health incidents related to chronic pesticide exposure and environmental contamination from improper or misapplication of pesticides. Overall, the weight of evidence suggests that the proposed requirements would result in long-term health benefits to certified and noncertified applicators, as well as to bystanders and the public.

It is reasonable to expect that the proposed rule would benefit the environment and the food supply. The proposed changes enhance private applicator competency standards to include information on protecting the environment during and after application, such as protecting pollinators and avoiding contamination of water supplies. The proposal 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 assessment for this proposal 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. 3). The environment should also be better protected from misapplication, which can result in cleaner water and less impact on non-target plants and animals.

In addition, the proposed changes to the certification regulation specifically mitigate risks to children. The proposal would implement a minimum age of 18 for certified applicators and noncertified applicators working under their direct supervision. Since children's bodies are still developing, they may be more susceptible to risks associated with RUP application and therefore would 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 (Refs. 20, 21 and 22). 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, 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 would 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. 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. 12). The proposed changes improve training for noncertified applicators, strengthen competency standards for private applicators, and require all applicators to demonstrate continued competency to use RUPs. These changes would 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 proposed changes may reduce children's exposure to RUPs and contamination caused by improper application of pesticides.

In the almost 4 decades since implementing the certification regulation, EPA has learned from the Pesticide Program Dialogue Committee, Certification and Training Assessment Group (CTAG), National Assessment of the Pesticide Worker Safety Program, meetings with State regulators, and other stakeholder interaction, that the national applicator certification program needs improvements, some of which can only be accomplished through rulemaking. This proposal reflects EPA's commitment to pay particular attention to the health of children and environmental justice concerns.

C. Considerations for Improving the Certification of Applicators 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. 23), followed by sections outlining State plan submission and review and certification in Indian country (40 CFR 171.7 through 171.10) in 1975 (Ref. 24), and the requirements for EPA-administered plans (40 CFR 171.11) in 1978 (Ref. 25). 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. 26 and 27).

In 1990, EPA proposed amendments to the certification regulation 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 a 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. 28). 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, State programs 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 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 State-to-State reciprocity (*i.e.*, recognition of other State certifications as valid), and hinder EPA's ability to develop national program materials that meet the needs of all States.

2. *Stakeholder Engagement.* In 1985, a taskforce was formed by EPA and the State-FIFRA Issues Research and Evaluation Group (SFIREG) to review existing certification programs and policies to determine what, if any, actions should be taken to improve the certification program. The taskforce included representatives from EPA, USDA, State cooperative extension services, and State lead agencies for pesticide regulation. The taskforce issued the *Report of the EPA/SFIREG Certification and Training Task Force* in August 1985 (Ref. 29), which identified areas in need of improvement and made specific recommendations for improvement. The taskforce noted the growing complexity and technological advancements in pesticides and pesticide use practices, especially in the agricultural community. Further, the taskforce recognized proper pesticide use as a growing issue under broader environmental concerns, such as groundwater protection, endangered species protection, worker protection, chronic toxicity, pesticide disposal, and pesticide residues in the food supply (Ref. 29). The agricultural and commercial applicator communities

were becoming aware of these issues and as a consequence sought increased and specialized training. Based on the identified issues and action in the applicator community, the taskforce suggested that EPA upgrade the competency requirements for private and commercial agricultural applicators.

The taskforce's recommendations included adding additional categories "for certain use and application methods which require more stringent attention [such as] Compound 1080, certain fumigants, or aerial application" (Ref. 29). In addition, the taskforce recommended strengthening the training for noncertified applicators working under the direct supervision of a certified applicator and requiring commercial applicators to retain records of the training (Ref. 29). It suggested that EPA add dealer requirements for recordkeeping about sales of RUPs and make private applicator competency standards closer to the general commercial applicator competency standards. Lastly, the report discussed the need for a standard recertification period and "sufficient standardization of training and the process of certification renewal to facilitate interstate commerce" (Ref. 29).

EPA proposed amendments to the certification regulation in 1990 (Ref. 28), based in part on the taskforce's report (Ref. 29). However, the proposed rule was not finalized and the taskforce's recommendations were not implemented at the Federal level. While many States adopted new regulations meeting or exceeding the proposed standards contained in the 1990 proposal, other States chose to retain their standards until EPA revised the Federal certification regulation. Some States sought to avoid potential conflicts with Federal regulations that had not been finalized, while other States were bound by laws or regulations that prohibited the State's standards from being more restrictive than Federal standards.

In 1996, stakeholders from the Federal and State governments and cooperative extension programs formed 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. 30), which recommended improvements for State and Federal pesticide applicator certification programs, including how to strengthen the certification regulation. 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. 30).

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. 31). 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. 32), which included many recommendations for rule revisions to improve the applicator certification program. The various individual opinions 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. 32). 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. 32). 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, the Pesticide Program Dialogue Committee (PPDC), formed a workgroup in 2006 to provide feedback to EPA on different areas for change to the certification regulation 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. 33).

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. 34).

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. 34). 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 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.

In addition to formal stakeholder outreach, EPA held numerous individual stakeholder meetings as requested to discuss concerns and suggestions in detail. Stakeholders requesting meetings included the National Association of State Departments of Agriculture (NASDA), the American Association of Pesticide Safety Educators (AAPSE), the Association of American Pesticide Control Officials (AAPCO), the Association of Structural Pest Control Regulatory Officials (ASPCRO), Crop Life America, and others.

3. *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. 35). The same 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. 35). 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 applicators that are children 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. 22). Decision-making skills and competence 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 application.

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 proposed changes would mitigate or eliminate many of the risks faced by adolescents covered by this rule.

4. *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, EPA sought public input on the design of EPA's plan for the periodic retrospective review of its regulations, and stakeholder suggestions for regulations that should be the first to undergo a retrospective review (76 FR 9988, February 23, 2011), and issued the final EPA plan, titled "Improving Our Regulations: Final Plan

for Periodic Retrospective Reviews of Existing Regulations,” in August 2011 (<http://www.epa.gov/regdarrt/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. Based on extensive interactions with stakeholders during review of the certification regulation, EPA has identified the potential for harmonized minimum requirements to enhance State-to-State reciprocity of applicator certifications, which could reduce the burden on the regulated community by promoting better coordination among the State, Federal, and Tribal partnerships; clarifying requirements; and modifying potentially redundant or restrictive regulation. EPA expects the proposed rule, if finalized, to achieve the benefits outlined throughout the preamble. For a summary of the benefits, see the table in Unit I.E. and the discussion of regulatory objectives in Unit III.B.

IV. Summary of Rationale and Introduction to Specific Revisions to Part 171

Units II. and III. describe the stakeholder engagement and reports highlighting the need to update the certification regulation. In addition to stakeholder recommendations, EPA believes the rule needs to be updated to address State variability and to support EPA registration decisions. Each of these reasons for updating the rule are discussed in this unit.

As noted in Unit III., EPA has not updated the certification regulation 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; most States go beyond the existing Federal requirements for applicator certification. This has created an uneven regulatory landscape between States and inhibits recognition of an applicator certification issued in one State by another State.

If certification does not represent a uniform degree of competence, this diversity also compromises 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 plans to raise the Federal standards for applicator competency. By adopting the proposed strengthened and additional competency standards, the rule would 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 may have to seek label amendments imposing other use limitations that could be more burdensome to users.

Units VI. to XX. describe the most significant of the proposed changes and alternative options considered by EPA. Each discussion is generally structured to provide, where appropriate:

- A concise statement of the proposed change.
- The current requirements of the certification regulation.
- Stakeholder feedback and research supporting the proposed change.
- A detailed description of the proposed change and the rationale for the change.
- An estimated cost.
- A description of primary alternatives considered by EPA and the reason for not proposing them.
- Specific questions on which EPA seeks feedback.

V. Public Comments

1. *Submitting CBI.* Do not submit this information to EPA through regulations.gov or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD-ROM that you mail to EPA, mark the outside of the disk or CD-ROM as CBI and then identify electronically within the disk or CD-ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for preparing your comments.* When preparing and submitting comments, see the commenting tips at <http://www.epa.gov/dockets/comments.html>.

VI. Revise Private Applicator Certification Standards

A. Enhance Private Applicator Competency Standards

1. *EPA’s proposal.* Because private applicators have access to and can apply the same RUPs as commercial applicators and therefore need to have similar knowledge and skills to apply pesticides safely and effectively, EPA proposes to amend the private applicator competency standards to include more specific information on pesticide application and safe use.

2. *Existing regulation.* The current rule has 5 topics under the competency standards for private applicators:

- Recognize common pests to be controlled and damage caused by them.
- Read and understand the label and labeling information.
- Apply pesticides in accordance with label instructions and warnings.
- Recognize local environmental situations that must be considered during application to avoid contamination.
- Recognize poisoning symptoms and procedures to follow in case of a pesticide accident. 40 CFR 171.5(a)(1) through (5).

These topics are listed without specific detail or clarification of the areas to be covered under each point. In contrast, the core standards of competency for commercial certification have nine major areas of focus with more specific sub-points listed under each. 40 CFR 171.4(b)(1).

3. *Stakeholder information.* Starting in 1985, EPA received requests from stakeholders to increase the level of detail and subject matter outlined in the competency standards for private applicators. SFIREG’s taskforce report calls for EPA to make private applicator competency standards parallel to those of commercial applicators (Ref. 29). CTAG recommended that all applicators with access to RUPs meet a similar competency standard (Ref. 30). Members of the PPDC workgroup also noted that since commercial and private applicators have access to the same products, they should meet similar competency standards (Ref. 33). Almost 90% of States noted that their private applicator certification standards are comparable to the core standards for commercial applicators (Ref. 5).

4. *Details of the proposal/rationale.* Based on the importance of understanding and following the pesticide’s labeling in managing risks to the applicator, the public, and the environment, EPA is proposing to enhance the competency standards for private applicators to more specifically

define the necessary knowledge and skills to be demonstrated by private applicators to become certified. More specific competency standards would better outline the knowledge and skills EPA expects private applicators to have in order to apply RUPs effectively and without unreasonable adverse effects.

The enhanced private applicator competency standards would cover: 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 is proposing a set of competency standards substantially parallel to the core standards for commercial applicators in the current rule at 40 CFR 171.4(a) and proposed as 40 CFR 171.105(a), with the addition of some points from the agricultural plant category and information particularly relevant to private applicators, such as the WPS. The proposed competency standards specifically cover protecting pollinators under the "environment" heading. In addition to the differences in the proposed general competency standards for private and commercial applicators, EPA proposes to maintain the distinction between private and commercial applicator competency standards required by FIFRA, 7 U.S.C. 136i(e), by not requiring private applicators to obtain a specific category certification in addition to the proposed general certification. For commercial applicators to become certified, they must pass the core and at least one category exam.

It is reasonable to expect that the more detailed competency standards would contribute to improving the overall competency of private applicators.

The proposed regulatory text would be located at 40 CFR 171.105(a).

5. *Costs/benefits.* EPA estimated the cost of the proposed enhancements to private applicator competency standards in conjunction with the requirement to strengthen private applicator certification requirements. The cost for these combined proposals is presented in Unit VI.B.5.

6. *Alternative options.* EPA considered adopting the core standards for commercial applicators in the current rule at 40 CFR 171.4(a) for private applicator competency standards. Private and commercial applicators have the same access to RUPs and need knowledge of basic safety and application techniques related to the use of these products. However, FIFRA requires that EPA establish separate standards for

commercial and private applicators, thereby prohibiting EPA from using the same core competency standards for commercial and private applicators. 7 U.S.C. 136i(e). In addition, because private applicators are engaged only in the production of agricultural commodities, it is necessary for them to demonstrate specific competency related to this type of RUP use rather than the broader range of commercial applicator competencies.

7. *Request for comment.* EPA seeks comment on the following:

- Should EPA consider adding points to or deleting points from the proposed private applicator competency standards? If so, what points and why?
- Are the competencies necessary to protect pollinators adequately covered in the proposed competency standards for private applicators? If not, please explain why and provide alternatives to ensure that private applicators are competent to use RUPs in a manner that protects pollinators.

B. Strengthen Private Applicator Certification Requirements

1. *EPA's proposal.* In order to address the need for private applicators to be competent to use RUPs, EPA proposes to require that persons seeking certification as private applicators complete a training program approved by the certifying authority that covers the standards of competency for private applicators or pass a written exam administered by the certifying authority.

2. *Existing regulation.* The certification regulation requires States to ensure that private applicators are competent and the certification process use a written or oral exam, or other method approved as part of the State certification plan. 40 CFR 171.5(b). The rule does not have a description of a certification system that is not a written or oral testing procedure.

3. *Stakeholder information.* SFIREG, the PPDC workgroup, and CTAG have recommended that private applicators be required to take and pass a written exam to become certified to use RUPs (Refs. 29, 33 and 36). Based on data from State certification plans, 42 States require private applicators to pass a written exam to become certified, and another 3 States offer the option to certify by passing a written exam (Ref. 5).

Stakeholders recognize the provision in FIFRA that prohibits EPA from requiring private applicators to take an exam to establish competency, 7 U.S.C. 136i(a)(1), and have suggested that EPA set a minimum training requirement for those States that do not require private applicators to take an exam.

4. *Details of the proposal/rationale.* To implement the enhanced competency standards for private applicators, EPA proposes to require that private applicators complete a training program approved by the certifying authority, or in the alternative, by passing a written exam. In either case, the certification process must cover the private applicator core standards described in Unit VI.A., and meet the procedural standards described in Unit IX. By allowing private applicators to be certified by either attending a training program or taking an exam, EPA's action does not conflict with the FIFRA's prohibition against EPA requiring private applicators of RUPs take an exam to establish competency. 7 U.S.C. 136i(a)(1).

Forty-two States already require private applicators to pass a written exam for certification, so EPA is proposing standard procedures for such examinations. Those States without a written exam requirement generally require some form of training, though the length, quality, and content of the training vary considerably between States, so EPA is proposing specific content requirements. It is reasonable to expect that the risks associated with private applicators' use of RUPs can be reduced through setting more specific minimum requirements for the content of and mechanisms to assess private applicator competency. This proposal acknowledges the need for more specific requirements for the alternate mechanism for private applicator certification and balances it with the recognition that certifying authorities are well-suited to develop training programs that cover the content EPA has deemed necessary to avoid unreasonable adverse effects from the use of RUPs by private applicators and meet the needs of the private applicators in their jurisdictions.

The proposed regulatory text would be located at 40 CFR 171.105(e).

5. *Costs.* EPA estimates this proposal would cost about \$3.7 million annually for private applicators (Ref. 3). EPA also estimates that those States that do not currently require an exam or training that last approximately 12 hours for private applicator certification would incur costs of about \$16,000 per year for the first two years after implementation to develop the programs, as well as \$61,000 per year thereafter for ongoing program administration (Ref. 3). EPA plans to support the development of exams and manuals for private applicator certification, which should reduce the costs to States.

6. *Alternative options considered but not proposed.* While maintaining the

same enhanced competency standards discussed in Unit VI.A., EPA considered alternative options of allowing private applicator certification by completing a training program of a specific length—either 4, 8, or 16 hours—that covers the content outlined in Unit VI.A. In developing the EPA-administered certification plan for Indian country, EPA developed a non-exam certification option for private applicators. Because of the difficulty of reaching candidates in various parts of the country and the need to make the training available throughout the year, the Federal Indian country training program is a pre-recorded, narrated PowerPoint presented through the Internet that runs 12 hours (Ref. 37). The training covers much of the content proposed in Unit VI.A., as well as specific requirements for pesticide applicators in Indian country. However, EPA decided not to propose a specific length for private applicator certification by training. EPA believes that specifying that private applicator non-exam certification must be accomplished through training and outlining the content that must be covered in the training would allow States and private applicator educators—who understand the content, the audience, and how to convey the content to the audience—to develop training programs that cover the content EPA deems necessary and meet the needs of their audiences. For example, narrated PowerPoint presentations and webinars may take a longer amount of time to cover the specified topics than an in-person training. Additionally, a mandatory training length could encourage some training providers to either rush through or draw out coverage of the content, thereby diminishing the effectiveness of the training. It is not clear that specifying the length of the training would better protect human health or the environment.

7. *Request for comment.* EPA specifically requests comment on the following:

- Please provide any relevant information on the efficacy of private applicator certification training programs or comparisons between training and testing programs.
- Please comment on the proposed structure of the non-exam option for private applicator certification.
- Would a different training requirement adequately convey the necessary information to private applicators? If so, please describe the alternate requirement.
- Is it necessary for EPA to specify a minimum length of time for the training program for private applicator

certification? If so, please provide the minimum length of the training program and explain its basis.

C. Eliminate Non-Reader Certification for Private Applicators

1. *EPA's proposal.* Due to the importance of an applicator's ability to read, understand, and follow the labeling in order to apply pesticides in a manner that would not cause unreasonable adverse effects to people or the environment, EPA proposes to delete the provision of the rule that allows a non-reader to become a certified private applicator.

2. *Existing regulation.* The existing rule contains a provision for limited certification of private applicators who cannot read by offering the option to obtain a product-specific certification. 40 CFR 171.5(b)(1). This provision allows States 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 State regulator. The person seeking certification is not required to demonstrate the ability to read and understand pesticide labeling.

As discussed earlier, FIFRA prohibits EPA from requiring private applicators to pass an exam to establish competency. 7 U.S.C. 136i(a)(1).

3. *Stakeholder information considered by EPA.* CTAG recommended that EPA establish a requirement for persons seeking certification to be able to read and understand English language pesticide labeling. Most PPDC workgroup members did not oppose elimination of the non-reader certification provision (Ref. 33). One State noted that there are small populations who either cannot read English-language labeling or who could not pass an exam, but who could use a single product without causing unreasonable adverse effects. It is EPA's understanding that 22 states have rules in place that make accommodations for persons who have difficulty reading and who want to become certified as a private applicator. These states are Alaska, Arizona, California, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Iowa, Maine, Michigan, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, Vermont, Virginia, Wisconsin, and Wyoming. Of these states, 6 have rules in place that make accommodations under the Americans with Disabilities Act for

persons who have documented disabilities. States are not required to track private applicators certified under the limited certification provision separately from other private applicator certification methods. However, EPA requested anecdotal information from the states on the use of this limited certification provision and most states responding said that the provision was never or rarely used.

4. *Details of the proposal/rationale.* EPA proposes to eliminate the current provision that allows States to offer limited certification to persons who cannot read the pesticide labeling. A key element of applicator competency is the ability to read the labeling because understanding the labeling is critical to preventing unreasonable adverse effects from the use of RUPs. Labeling is increasingly relied upon to transmit product-specific information relative to subjects such as worker protection, groundwater, endangered species, and human exposure. In addition, labeling may change frequently. Approved uses, application rates, and application methods may be deleted or added by a registrant voluntarily or as part of an EPA risk mitigation strategy. The potential for misuse of RUPs presents an unreasonable risk unless the applicator is able to read and correctly interpret the labeling that accompanies each product he or she uses. While the current system is intended to ensure the applicator has knowledge of a specific product's labeling, there is no way to ensure the applicator would be aware of subsequent changes. It is reasonable to expect that by eliminating the specific certification method for applicators who cannot read, RUPs are more likely to be applied as required by their labeling, and therefore will be less likely to cause unreasonable adverse effects to people or the environment.

EPA recognizes that persons can be certified as private applicators by attending a training course. In this case, EPA expects that the certifying body would ensure that the applicator demonstrated all of the necessary competencies to apply RUPs, including the ability to read.

The proposed change does not affect noncertified persons applying RUPs under the direct supervision of a certified applicator. It is conceivable that persons who cannot read labeling could use RUPs properly while working under the direct supervision of a certified applicator. EPA is proposing to strengthen the training and other requirements related to noncertified applicators to ensure that they understand the labeling requirements for each application, are supervised by

a qualified applicator familiar with the specific product labeling for each application, and have equipment available to contact the supervising applicator immediately in the event of an emergency or with any questions. These strengthened standards should provide sufficient training that a non-reader or a person who cannot read English could apply RUPs under the direct supervision of a certified applicator without causing unreasonable adverse effects to the applicator, the public, or the environment.

5. *Costs.* EPA expects the cost of this proposal would be negligible, but has not quantified the cost (Ref. 3). Based on EPA's understanding, the limited certification option is only offered in 22 States, and in those states it is very rarely, if ever, used. EPA did not quantify the baseline cost to States for maintaining the existing provision or the potential reduction in administrative burden to States from eliminating it. EPA anticipates that the minimal costs would be borne by persons who could not qualify as private applicators absent a limited certification provision. These persons would have several options. First they could hire a person on the farm who can be certified as a private applicator to conduct RUP applications. Second, they could contract with a commercial applicator to conduct RUP applications. Third, they could substitute non-RUPs for the RUPs. EPA is sensitive to the fact that elimination of this provision may increase costs for a very small number of private applicators, but it is reasonable to expect that this adverse impact would be small in comparison to the potential reduction in risks to the applicator, the public, and the environment. EPA does not expect any impact on the employability of private applicators because by definition, a private applicator cannot receive compensation for applying RUPs on the property of another.

If the proposal is finalized, EPA would allow existing non-reader certifications to remain valid until expiration or recertification is required under the implementation of the final rule. Because most non-reader certifications are issued for a specific application in a single growing season, EPA anticipates that non-reader certification would not continue for any significant period of time if this proposal is finalized.

6. *Alternative options considered but not proposed.* EPA also considered retaining the limited certification option for private applicator certification and strengthening the requirements. For this

alternative scenario, the limited certification would be valid for a single product and for a single season. The State would have to evaluate each request for a limited certification separately. This option would codify what EPA understands to be the current practice in States that allow non-reader certification. Under this option, a person could be certified to use a single product based on a specific product's labeling, but might not be aware of subsequent changes to the labeling of the same product purchased later in the season. Given the importance of avoiding unreasonable adverse effects from the use of RUPs and the limited use of this certification option, EPA decided not to propose this option.

7. *Request for comment.* EPA requests comment on the following questions:

- Would the elimination of the non-reader provision cause hardship to specific groups of private applicators? If so, please describe the group and the hardship.
- Should EPA allow private applicators currently certified under this provision to retain their certification if the non-reader provision is eliminated? Please explain why. If so, how would "grandfathering in" private applicators certified under this provision impact other proposed changes, such as requirements for maintaining certification and supervising noncertified applicators?
- Do alternatives to the non-reader certification option exist that would offer an adequate level of protection while maintaining a narrow exception to certification requirements? If so, please describe.

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

1. *Overview.* In order to address the elevated risks associated with certain specific methods of application used by certified private and commercial applicators to apply RUPs, EPA proposes to add application method-specific certification categories for private and commercial applicators that use RUPs to conduct soil fumigation, non-soil fumigation, and aerial applications. These application method-specific categories would be independent of the pest control categories in the existing rule, for example, a person certified in the aerial method category would also need certification in one or more pest control categories, such as crop pest control, forest pest control, or public health pest control.

2. *Existing regulation.* The existing rule has no categories for private

applicators. For commercial applicators, the existing rule does not have any application method-specific categories, although it does have 11 pest control categories: 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.

3. *Stakeholder information considered by EPA.* Stakeholders, including SFIREG, CTAG, AAPCO, and members of the PPDC workgroup, recommended that EPA consider adding application method-specific certification categories for high-risk uses (Refs. 29 and 30). States have noted that certain application methods, specifically fumigation and aerial application, pose elevated risks of exposure or harm to the applicator, bystanders, or the environment.

Some States have addressed these elevated risks related to these application methods by adding specific categories for both private and commercial applicators seeking to use certain application methods. States that have chosen to add categories have done so independently, resulting in different standards and levels of protection across the country. EPA reviewed the categories related to application methods adopted by the States and other stakeholders. According to data from 2013, 32 States (Alaska, California, Connecticut, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Montana, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, South Carolina, Texas, Utah, Vermont, Virginia, Wisconsin, Wyoming) require commercial applicators to be certified for aerial application and 1 State (Wisconsin) requires the same for private applicators. For soil fumigation, 16 States (California, Connecticut, Delaware, Florida, Idaho, Illinois, Minnesota, Nebraska, New York, North Carolina, Ohio, Oregon, Pennsylvania, Virginia, Washington, Wisconsin) require commercial applicators to obtain a specific certification and 10 States (Hawaii, Idaho, Minnesota, Nevada, North Carolina, Ohio, Pennsylvania, Washington, Wisconsin, Virginia) have a similar requirement for private applicators. Finally, for non-soil fumigation, 41 States (Alabama, Arizona, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia,

Hawaii, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, Virginia, Washington State, West Virginia, Wisconsin, Wyoming) mandate that commercial applicators be certified in this specific category to conduct non-soil fumigation applications and 8 States (Arizona, Iowa, Minnesota, Nevada, North Dakota, Ohio, Pennsylvania, Utah) have a similar requirement for private applicators.

The 2008 REDs for soil fumigants acknowledged the elevated risks (Ref. 17). As a result of these risks, EPA required additional training for soil fumigant applicators through labeling amendments. The decision 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. Several States have opted to require applicators to be certified in a specific soil fumigation category. As chemicals are reviewed as part of the ongoing registration review program, risks associated with individual pesticides may be addressed through labeling requirements for additional training or competency.

4. *Details of the proposal/rationale.* The Agency proposes to establish three application method-specific certification categories for private and commercial applicators: Soil fumigation, non-soil fumigation, and aerial. Based on the discussions with States and review of existing State-adopted categories, EPA proposes these categories because EPA has concluded that these categories of use for RUPs may cause unreasonable adverse effects without additional regulation. These types of RUP application require specialized skills and present unique risks, such that it is reasonable and appropriate for private and commercial applicators to acquire or demonstrate the pertinent knowledge and skills before being certified to apply RUPs in any of these three categories. For commercial applicators, certification in any of the application method-specific categories would only be available to persons certified in a relevant pest control category as described in proposed 40 CFR 171.101(a). Private applicators would need to satisfy the general competency standards described in Unit VI in order to qualify for

additional certification in an application method-specific category.

Pesticide application and agriculture both are becoming increasingly specialized. Improper use of application equipment may lead to increased risks to the health of the applicator, workers, the environment, and the public. Additionally, certain categories of pesticides, including fumigants, pose an inherently higher risk of acute injury or death if the applicator does not understand and follow the labeling. These increased risks can be mitigated by requiring applicators to demonstrate a more specific set of competencies relative to certain application methods.

Soil fumigation is a complicated process, and involves highly toxic pesticide products that can cause acute, severe injury to the applicator, handler, bystanders, or the environment if not used properly. Given the increased potential for harm to human health and the environment, EPA proposes to establish soil fumigation categories for private and commercial applicators. Under the re-registration decisions for the soil fumigants (Refs. 38, 39, 40 and 41), additional soil fumigation-specific training is required for applicators certified to use RUPs registered for use as soil fumigants due to their increased potential for harm. Because there was no generally applicable requirement or standard of competence for soil fumigation, EPA required each registrant to develop and implement a soil fumigant training program. In discussing this approach with States, EPA recognized that an applicator certification category specific to soil fumigation with a single, uniform set of criteria would be less burdensome than requiring separate, registrant-sponsored trainings for each soil fumigation product. States have requested that EPA consider requiring all applicators using soil fumigants to be certified in a single, soil fumigation category in lieu of each product's labeling requirement for registrant-sponsored training (Ref. 42). The labeling for soil fumigants provides the option for applicators to qualify to purchase and use these products either by attending the registrant training specified on the labeling for each specific chemical or by being certified in a soil fumigation category that covers all active ingredients and meets the competency standards approved by EPA. Recognizing the potential risks from soil fumigants and the importance of applicator competency, EPA worked with State regulators, cooperative extension personnel, soil fumigant applicators, and industry to develop a training manual and exam item bank (database of questions related to soil

fumigation that can be used on a certification exam) that States can use for certification of applicators performing soil fumigation (Refs. 43 and 44).

Under the proposal, commercial applicator certification in the soil fumigation category would require the applicator to demonstrate competency in soil fumigation by passing a written exam and to hold concurrent certification in each of the pest control categories in which he or she intends to conduct this type of application, *e.g.*, agricultural pest control—plant; ornamental and turf pest control; forest pest control; right-of-way pest control; regulatory pest control; or demonstration and research. Private applicator certification in soil fumigation would require the applicator to demonstrate competency by passing a written exam or completing a training program covering the proposed competency standards for soil fumigation (proposed at 40 CFR 171.105(c)(1)) in addition to holding a valid general private applicator certification.

Other (non-soil) types of fumigation require different techniques and training than soil fumigation, but have similar potential to harm the applicator, the environment, and the public. For example, although fumigation of a shipping container requires different application equipment, monitoring strategy, and mitigation of environmental concerns than soil fumigation, both types of fumigation can cause acute, severe injury to the applicator, handler, bystanders, or the environment if not conducted properly. Given the high potential for harm to human health and the environment, EPA proposes to add non-soil fumigation application method-specific certification categories for private and commercial applicators. Commercial applicator certification in the non-soil fumigation category would require the applicator to demonstrate competency in non-soil fumigation by passing a written exam and to hold concurrent certification in each of the pest control categories in which he or she intends to conduct this type of application, *e.g.*, agricultural pest control—plant; forest pest control; ornamental and turf pest control; seed treatment; aquatic pest control; industrial, institutional, structural, and health-related pest control; public health pest control; regulatory pest control; or demonstration and research. Private applicator certification in non-soil fumigation would require the applicator to demonstrate competency by passing a written exam or completing a training

program covering the proposed competency standards for non-soil fumigation (proposed at 40 CFR 171.105(c)(2)) in addition to holding a valid general private applicator certification.

Applying pesticides with a plane or helicopter poses a unique set of risks and challenges to the applicator, bystanders, and the environment. There is heightened concern for spray drift, elevated potential for off-target applications and bystander exposure, and an increased need for application equipment to be calibrated accurately. Aerial applicators are required to comply not only with EPA regulations for the application of pesticides, but also Federal Aviation Administration requirements for pilots making applications using an aircraft at 14 CFR part 137. Recognizing the potential risks and the importance of applicator competency when performing aerial applications, EPA worked with State regulators, cooperative extension personnel, aerial applicators, and industry to develop a training manual and exam item bank that States can use for certification of aerial applicators (Ref. 45). The unique challenges posed by this application method warrant establishing aerial application categories for private and commercial applicators. Accordingly, in order for a commercial applicator to make aerial applications of RUPs, the commercial applicator would be required to demonstrate competency in aerial application by passing a written exam and to hold concurrent certification in each of the pest control categories in which he or she intends to conduct aerial application, *e.g.*, agricultural pest control—plant; ornamental and turf pest control; forest pest control; aquatic pest control; right-of-way pest control; public health pest control; demonstration and research; or regulatory pest control. Private applicator certification in aerial application would require the applicator to demonstrate competency by passing a written exam or completing a training program covering the proposed competency standards for aerial application (proposed at 40 CFR 171.105(c)(3)) in addition to holding a valid general private applicator certification.

Requirements for general private applicator certification in each of the aforementioned application method-specific categories would parallel the certification requirements proposed in Unit VI.B. Private applicators would be required to either pass a written exam or complete a training program for each application method-specific category that covers the proposed competency

standards and is approved by the certifying authority. A person who does not have a general private applicator certification would not be eligible for certification in any of the application method-specific categories. These additional categories of certification would provide a measure of assurance that the private applicator has the specialized knowledge of application methods, equipment, and the characteristics of the pesticides pertinent to a specific category to use the pesticide without generally causing unreasonable adverse effects.

The regulatory text for the proposed commercial applicator application method-specific categories would be located at 40 CFR 171.101(b). The regulatory text for the proposed private applicator application method-specific categories would be located at 40 CFR 171.105(c).

5. *Costs.* The cost estimates are broken out by each category for private and commercial applicators (Ref. 3). As discussed in Unit VI.B., EPA plans to support the development of exams and manuals for the proposed application-method specific categories, which should reduce the overall burden to States associated with this proposal. EPA has already developed and made available to State certification agencies free of charge training manuals and exam item banks for the aerial and soil fumigation categories. States that elect to use the EPA-developed materials would incur minimal development costs; however, the costs below reflect the full estimated cost to States and do not include EPA assistance in developing exams and manuals. EPA expects the actual costs to States would be lower (Ref. 3).

i. *Private applicators.* EPA estimates the cost of adding a private aerial category to be about \$2,000 annually, which reflects the aggregate cost to all affected private aerial applicators (Ref. 3). The low cost to applicators reflects the number of existing private applicators certified in aerial application and the low estimated number of new private applicators seeking aerial certification. The costs to States to develop and administer exams or training for certification would be about \$108,000 annually for the first 2 years of implementation (Ref. 3). Most of this cost would be borne within the first two years to develop the exams and recognizes that nationally developed materials will be available for States to adapt for their own programs.

EPA estimates that adding a soil fumigation category for private applicators would not result in any additional cost to private applicators.

The labeling for soil fumigation products already requires applicators to either participate in registrant training for each product or to be certified in a State soil fumigation category.

EPA estimates that the cost of adding a non-soil fumigation category for private applicators to be about \$78,000 annually, which reflects the aggregate cost to all affected private applicators conducting non-soil fumigation (Ref. 3). The estimate represents the private applicators' opportunity cost of time spent in training or preparing for and taking the certification exam.

EPA estimates that the costs to States to develop and administer exams or training for certification in the soil and non-soil fumigation categories would be \$197,000 annually for the first 2 years of implementation.

ii. *Commercial applicators.* EPA estimates the cost of adding an aerial category for commercial applicators to be about \$98,000 annually, which reflects the aggregate cost to all affected commercial aerial applicators (Ref. 3). The low cost to applicators reflects the number of States that already require commercial applicators to obtain a specific certification to perform aerial application and the relatively low number of applicators that seek certification in an aerial category each year. The cost to States to develop a certification exam for this category would be about \$39,000 annually for the first 2 years after implementation (Ref. 3).

EPA estimates that adding a soil fumigation category for commercial applicators would not result in any additional cost to commercial applicators (Ref. 3). The labeling for soil fumigation products already requires applicators to either participate in registrant training for each product or to be certified in a State soil fumigation category.

EPA estimates the cost of adding a non-soil fumigation category for commercial applicators to be about \$131,000 annually, which reflects the cost to all affected commercial applicators conducting non-soil fumigation (Ref. 3). Many States already require commercial applicators to be certified in either general fumigation, soil fumigation, or another type of fumigation. However, the cost to add this category is higher than for other commercial applicator categories proposed because most States do not already have categories for both soil and non-soil fumigation.

The costs to States to develop non-soil fumigation certification exams would be about \$30,000 per year for the first 2 years following implementation (Ref. 3).

6. *Alternative options considered by EPA but not proposed.* The Agency considered six alternatives to the proposed requirement.

i. *Specify a certain number of training hours for private applicator certification in these categories.* EPA considered requiring private applicators to complete a specific number of hours of training (either 4 or 8 hours) or to pass an exam in order to become certified in an application method-specific category. As discussed above in Unit VI.B., it is not clear that a mandatory minimum length for private applicator certification training programs would not ensure specific competency.

ii. *Continue to rely on label-specific risk mitigation to address elevated risks associated with certain application methods.* EPA considered relying on imposing risk mitigation measures through labeling, limiting the use of high risk products or higher risk application methods. This approach would be implemented on a case-by-case basis and not directly linked to pesticide applicator certification programs. The Agency learned that applicators, States, and cooperative extension service programs did not support this approach and faced significant burdens when this approach was used to regulate soil fumigants (Refs. 46, 47, 48 and 49). Based on the adverse reaction and impact to States, as well as the need to promote applicator competency and national consistency, EPA decided not to propose this option. It is reasonable to expect that adding categories at the Federal level to cover many types of pesticides applied by specific mechanisms would be more efficient than imposing similar but not identical requirements on each pesticide label.

iii. *Consolidate soil fumigation and non-soil fumigation into a single fumigation category.* To reduce the burden on State certification authorities and applicators who perform both types of fumigation applications, EPA considered proposing a single general fumigation concurrent category instead of separate soil and non-soil fumigation concurrent categories. The knowledge and skills necessary to perform soil fumigation and non-soil fumigation differ substantially. In addition, there are significant differences in risks to the applicator and environmental concerns between the two methods for applying fumigants. The reregistration decisions on the soil fumigants highlighted the specific use conditions and risk mitigation measures necessary to apply soil fumigants without unreasonable adverse effects, not necessary restrictions for applications of all

fumigants. Combining these related categories may reduce the burden on certifying agencies and on some applicators; however, applicators who perform only soil fumigation or only non-soil fumigation would receive less instruction specific to their particular application method and more instruction than they wish on a method for which they may have no use. In order to ensure that applicators have a level of competency in the applicable application method proportional to the potential risk, EPA decided not to propose a general fumigation category.

iv. *Add application method-specific standards as subcategories under the existing commercial applicator categories.* EPA considered adding the categories discussed in this Unit as subcategories under the applicable existing commercial applicator pest control categories. For example, a person seeking to perform aerial application to agricultural fields and forests, and for mosquito control would have to take an aerial exam specific to each of these categories. This would require creating subcategories under almost every pest control category. An applicator would have to be certified not only in each relevant pest control category, but also in a subcategory under each in order to use a specific application method. Application method-specific certification requirements as proposed are expected to impose a lower burden on applicators seeking certification, e.g., one aerial method-specific certification exam rather than separate aerial subcategory exams under agricultural plant, forest, and aquatic pest control. The competency necessary to employ a specific application method, i.e., soil fumigation, non-soil fumigation, or aerial pest control, does not appear to vary substantially based on where the application occurs. For example, an applicator performing soil fumigation needs to know the same techniques and safety measures whether doing it in for a field crop or for ornamental pest control. Therefore, EPA decided not to propose the application method-specific certification as subcategories under the commercial applicator pest control categories.

v. *Add an application method-specific category for chemigation.* Chemigation, i.e., application of pesticides through irrigation systems, has a higher potential for environmental contamination if not conducted properly and poses additional risks to the applicator or those working under the applicator's direct supervision due to the nature of the equipment. Chemigation can contaminate ground

and drinking water that flow directly into a water supply, if uncalibrated equipment causes application over the rate specified on the labeling, or improperly maintained equipment leaks treated water from the chemigation system. Applicators need to be knowledgeable about the equipment specific to chemigation necessary to prevent contamination of groundwater, including but not limited to anti-backflow devices, injection pumps, storage tanks, safety valves, anti-pollution devices, and calibration devices. In addition, applicators should be knowledgeable about the risks, benefits, and necessary precautions associated with chemigation in order to protect themselves before, during, and after the application. EPA considered adding an application method-specific category to perform chemigation; however, very few States have added a specific category for this application method and very few incidents involving this application method have been reported to EPA. Absent more persuasive evidence that chemigation is causing adverse effects that could be mitigated through a demonstration of competency by applicators who use this application method, EPA is not proposing this as an application method-specific category at this time.

vi. *Add a "limited use" category.* EPA considered adding a category for commercial applicators who would be certified for limited uses of specific RUP pesticides or in niche application scenarios. For example, some States require applicators to be certified to perform sewer line root control, wood treatment, biocide use in hydraulic fracturing (commonly called "fracking"), or use of horse sterilization products. These types of applications require use of a single product or very limited set of products and specific application techniques. Frequently, the industry in which these applications are made (e.g., fracking) provides training to applicators on proper use of the product(s) and other specific information related to use in the specific situation. However, applicators often have to be certified by taking the core exam, a category exam (e.g., industrial, institutional, structural, and health-related pest control), and an additional exam for the limited use subcategory (e.g., sewer line root control), although they will only be performing specific applications and using a few products. This places a substantial burden on applicators to demonstrate competency related to types of applications they will not perform. It also places a burden on States to maintain an infrastructure to

address the needs of niche applicator populations.

Some States have developed and updated exams and training programs in these limited use categories that have fewer than 10 certified applicators. Other States handle limited use applicators differently. They require commercial applicators to pass the core exam, demonstrating competency in basic environmental safety; reading, understanding, and following pesticide labeling; calculating application rates; and other general application techniques. The State relies on the industry to provide the necessary training related to the limited use. The State clearly marks on the applicator's certification credential that the applicator is only certified for the purchase and use of a limited subset of products, not all RUPs. States that follow the second approach described above note they are confident that applicators are prepared to conduct applications in a manner that will protect themselves, the public, and the environment.

EPA considered adding a "limited use" category for commercial applicators that would allow States and applicators to reduce the burden associated with maintaining certification categories for few applicators performing specific applications. Commercial applicators must demonstrate competency in core and for the specific category in which they intend to use RUPs. To address the need for category-specific certification for applicators performing "limited use" applications of RUPs, EPA considered three options, other than a category-specific exam. First, the applicator could be required to comply with industry-provided training or certification requirements as specified on the product labeling. This is similar to the requirements for people who treat water using chlorine gas—the labeling requires the applicator to use the product in accordance with a manual from The Chlorine Institute that details proper use of the product and safety procedures. Second, the applicator could be required to hold applicable State or Federal professional credentials in addition to passing the core exam. For example, a plumber performing sewer line root control who uses a specific RUP as part of his services could be required to pass the core exam and to hold a State-issued plumbing license to demonstrate his competency to use the specific RUP safely in the limited circumstance. Third, the applicator could demonstrate competency as required by a specific product's labeling. For example, the

labeling for sodium fluoroacetate (Compound 1080 used in livestock protection collars) details specific competency standards that the applicator must meet to use the product; certifying authorities that allow use of this product must develop a specific certification category that covers the labeling-based requirements.

A commercial applicator seeking certification in a limited use category would be required to demonstrate competency by passing the core exam and satisfying one of the category-specific methods described in this Unit. The applicator's certification would be limited only to the specific uses related to his certification. EPA would require that the certifying authority ensure that any certification documentation, *e.g.*, a license, clearly note the limited set of RUPs available for purchase and use by an applicator certified in a limited use category.

EPA is actively seeking additional information from States, applicators, and industry on the value of a limited use category and will consider any public comments received in deciding whether to include this type of category in the final rule.

7. Request for comment. EPA specifically requests comment on the following questions:

- Would the proposed categories adequately establish competency for the specified application methods?
- Should EPA consider adding or deleting any of the proposed private applicator application method-specific certification categories? If so, which category(ies) and why?
- Please provide feedback on the proposed competency standards for private applicators in each of the application method-specific categories. Do the proposed standards contain sufficient detail? Are there any elements of these types of application that are not covered adequately?
- Should EPA consider adding or deleting any of the proposed commercial applicator application method-specific certification categories? If so, which category(ies) and why?
- Should EPA require that commercial applicators be certified in one or more pest control categories in order to be certified in one of the application method-specific certification categories? If so, please specify which other categories should be considered prerequisites for each application method-specific certification (in addition to those proposed) and explain why.
- Should EPA add an application method-specific certification category for chemigation? If so, why? Please

provide any data about chemigation that would support the addition of a chemigation certification category.

- Should EPA consider adding any categories (not application method-specific) for commercial applicators? If so, which category(ies) and why?
 - Please provide feedback on adding a "limited use" category for commercial applicators. Would the proposed options for category-specific demonstrations of competency for limited use certification minimize burden on applicators and State certification authorities while ensuring that RUPs are applied in a manner that would not cause unreasonable adverse effects on human health or the environment? Are there other options for offering a limited use certification for certain RUPs that EPA has not considered? If so, please describe.
 - Please provide any relevant information on how the regulation could best balance flexibility and uniformity of the certification categories used in different jurisdictions.
 - Are the competencies necessary to treat bee hives adequately covered in the agricultural pest control—animal category? If not, please explain why this category does not ensure that applicators are competent to use RUPs to treat bee hives and provide alternatives to ensure that applicators are competent to use RUPs in this manner.
 - What were the impacts of EPA's decision to make soil fumigants restricted use on state certification programs and on the number of certified applicators? Would states expect a similar impact if the proposed application method-specific categories are included in the final rule?
 - For entities that have already developed certification requirements for persons using soil fumigants, please provide a description of the costs incurred.
- VIII. Establish Predator Control Categories for Commercial and Private Applicator Certification**
- 1. Overview.* In order to address the specific risks and competency requirements associated with the use of predator control products and to formalize the existing labeling-based requirements for specific certification to use these products, EPA proposes to add categories for both private and commercial applicators to use two mammalian predator control methods: Sodium fluoroacetate (Compound 1080 used in livestock protection collars) and sodium cyanide in an M-44 device.
- 2. Existing regulation.* The existing regulation does not have categories for

the use of sodium fluoroacetate in livestock protection collars or sodium cyanide in an M-44 device. Registration decisions for these products have established specific competency standards and require applicators to be competent in how to use the products properly (Refs. 50 and 51).

3. *Stakeholder information considered by EPA.* Sodium fluoroacetate is a highly acutely toxic predicide used to control coyotes that prey on sheep and goats. Currently registered end-use products are injected into the rubber reservoirs of livestock protection collars (LPC). These collars are strapped to the throats of sheep or goats. Coyotes attempting to attack livestock wearing LPCs are likely to puncture the LPCs and be fatally poisoned by sodium fluoroacetate as a result. Sodium fluoroacetate is highly toxic to humans and to non-target mammals. No antidote exists for sodium fluoroacetate.

Sodium cyanide dispensed through an M-44 device is another highly toxic predicide that poses extreme risks to humans and non-target mammals. M-44 is an ejector device used to dispense sodium cyanide as a single dose poison to control predators of livestock, poultry, or Federally-designated threatened or endangered species, or those that are vectors of communicable diseases. EPA has registered this product for use in pastures, range land, and forests, only by trained and certified applicators under the direct supervision of a government agency.

4. *Details of the proposal/rationale.* EPA proposes to establish predator control categories for commercial applicators and private applicators, codifying the current standards of competency outlined in the specific registration decisions for each of these pesticides. Based on the extreme risks posed by the use of sodium fluoroacetate in livestock protection collars and sodium cyanide dispensed through M-44 devices, EPA only grants registrations to State, Tribal, and Federal agencies. EPA's existing registrations of these products prohibit their use except by applicators who meet certain criteria. Each registration decision outlines specific competencies the applicator must demonstrate and the process that must be used to certify applicators of these products. EPA is adding specific categories to the rule to codify the competency standards established by the products' labeling and to facilitate the adoption of a certification category in areas where these products are used.

The predator control categories for commercial applicators will be located

at 40 CFR 171.101(a)(10) and the categories for private applicators will be located at 40 CFR 171.105(b).

5. *Costs.* EPA estimates that this proposal will not impose any additional costs because the labeling requirements of sodium fluoroacetate and sodium cyanide predator control products already establish competency standards and require specific certification to use these products (Ref. 3). It is reasonable to expect that the costs associated with this proposal are de minimus because it merely codifies in the regulation the requirement already imposed through the products' labeling.

6. *Request for comment.* EPA requests comment on the proposed addition of pest control categories for certification to use sodium fluoroacetate in livestock protection collars and sodium cyanide dispensed through an M-44 device.

IX. Establish Requirements To Ensure Security and Effectiveness of Exam and Training Administration

1. *Overview.* In order to address concerns that administration of pesticide applicator exams and trainings currently affords opportunity for cheating or fraud, and to maintain the integrity of exams, EPA proposes to add requirements for those seeking certification or recertification to present identification at the time of the exam or training session. EPA also proposes to codify the existing policy that all certification exams be closed book and proctored (Ref. 52).

2. *Existing regulation.* The rule establishes that commercial applicators must demonstrate competence by passing written exams, and as appropriate, through performance testing. 40 CFR 171.4(a). Private applicators may demonstrate competency through a written or oral exam, or other method established by the State and approved by EPA. 171.5(b). The rule does not have requirements for verification of the identity of persons seeking certification or recertification or for exams to be proctored.

3. *Stakeholder information considered by EPA.* States have varying requirements for exams because there are no minimum standards for exam development and administration. Some States place a priority on developing content-relevant exams and administering them in a secure manner, while other States allow candidates to bring notes and manuals into the exam which may undermine the competency determination process. EPA is aware of at least one situation in which a State offered a practice test in the study materials and administered exactly the

same exam for certification. In cases where exam security is not implemented, the integrity of the entire certification process can be compromised.

CTAG recognized the gap in security in the applicator certification program and developed the *Exam Administration and Security Procedures Manual* (Ref. 53). This document recommends practical ways for States to ensure the integrity of their applicator certification exams, including establishing chain of custody requirements, treating exam booklets and answer sheets as controlled documents, proctoring exams, implementing security requirements such as checking all booklets for missing pages before releasing exam candidates, and not allowing candidates to bring in or remove scratch paper from the exam room. States invest significant resources in developing and administering exams for applicator certification. A breach in security, such as a person taking an exam booklet from the test site or copying questions and answers on scratch paper and sharing them with others, compromises the exam's integrity and could require the State to invest substantial resources to develop another exam. Many States have consulted CTAG's document to incorporate elements of exam security into their certification programs.

States have recognized the need to ensure that the candidate pursuing certification by exam or training or attending a recertification session is the person seeking or currently holding a certification. CTAG recommended that EPA require positive identification of candidates for pesticide certification exams before the exam is issued and before any credentials are issued, noting that the lack of such a requirement "calls into question the integrity of the entire certification system and provides opportunity for abuse" (Ref. 54). CTAG suggests that States that do not currently ask for any form of identification before administering exams review their policies, regulations, and laws and consider adopting a mechanism to verify the identification of all individuals taking their exams. CTAG also recommended that States verify the identity of certified applicators attending recertification training sessions (Ref. 55).

Based on an EPA review of State program data, 36 States require persons seeking commercial certification to present identification prior to taking the exam and 27 States have a similar requirement for private applicators seeking certification through an exam or training. Similarly, 22 States require

commercial applicators to present identification at recertification training sessions or exams, and 29 States require the same for private applicators (Ref. 3). Many States seem to recognize the importance of maintaining the integrity of the pesticide applicator certification and recertification programs, evidenced by the number of States that have adopted a requirement to verify the identity of candidates.

States have raised the need for a standard definition of closed-book exams to ensure that certifying authorities using EPA-developed exams or sharing a State-developed exam with another State have confidence that the exam administration would meet a consistent security standard. CTAG recommended that EPA require States using the EPA-developed exams to agree to administer them as closed-book exams, meaning the candidate cannot bring in any materials, *e.g.*, study manuals, notebooks, or scrap paper. Any materials necessary, apart from non-memory calculators and writing utensils, *e.g.*, scratch paper or reference pesticide labeling, would be provided by the proctor and collected at the end of the exam. CTAG believes this would help preserve the integrity of the exam process and give confidence that the security of EPA-developed exams is not compromised by varying administration standards across States.

4. *Details of the proposal/rationale.*

The Agency proposes to require that applicator certification exams for initial certification and recertification be closed book, proctored, and that the identity of each test taker be verified. The identity of the applicant must also be verified where the State or other agency certifies or recertifies applicators based on training rather than an exam. EPA considers these requirements essential elements of the certification process because exams and training programs are the means used to assure that those who are seeking to become certified have adequate training and experience to use RUPs without causing unreasonable adverse effects. It is also reasonable to expect that these security requirements would give States confidence that exams are administered consistently across the country in such a way to ensure their integrity.

The Agency proposes to require that exams be “closed book,” that is, the test taker would not be allowed to use any materials, for example notes or study guides, other than the materials provided by the test administrator during the exam. EPA is proposing this requirement for two reasons. First, a closed-book exam provides a more reliable gauge of the individual test

taker’s competency because the outcome depends more directly on the test taker’s personal knowledge and understanding than does an exam where the test-taker may refer to his or her own notes or other study aids. Second, limitations on outside materials reduce the likelihood of test takers copying questions and removing them from the exam room to share with subsequent test takers. Implementing closed-book exams is one step towards improving exam security and the competency of certified applicators.

EPA proposes to require that proctors:

- Verify the identity and age of persons taking the exam by checking identification as required under the proposed rule and have examinees sign an exam roster.
- Monitor examinees throughout the exam period.
- Instruct examinees in exam procedures before beginning the exam.
- Keep exams secure before, during, and after the exam period.
- Allow only examinees to access the exam 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 exam period.
- Ensure that no copies of the exam or any associated reference materials are made and/or retained by examinees.
- Ensure that examinees do not have access to reference materials other than those that are approved by the certifying authority and provided by the proctor.
- Review reference materials provided to examinees when the exam is complete, to ensure that no portion of the reference material has been removed or destroyed.
- Report to the certifying authority any exam administration inconsistencies or irregularities, including but not limited to cheating, use of unauthorized materials, and attempts to copy or retain the exam.
- Comply with any other instructions required by the certifying authority related to exam administration.

EPA proposes to prohibit a proctor from seeking certification at any exam session that he or she is proctoring. Where applicator exams require use of resource materials (for example, requiring the candidate to identify pests based on depictions of plant damage, interpret specific labels, or demonstrate other skills or abilities beyond the core requirements), the proctor would provide the necessary materials (*e.g.*, sample labeling, reference books) and collect them after the exam is completed.

Finally, EPA proposes a requirement for States to ensure that test or training administrators verify the identity of persons seeking initial applicator certification and recertification. Many organizations and institutions require a person taking a test for possible employment to present valid, government-issued photo identification. It is important that pesticide applicator candidates are required to present valid photo identification when they sit for the exam, receive their credentials, and purchase RUPs. This requirement would help to ensure that the person who takes the exam is the same person who receives the certification, which could help prevent a candidate from sending a more qualified or prepared person to take the exam under his name, and to verify that the candidate meets the minimum age requirement. See Units XII. and XIII. Preventing abuse of the exam process is necessary to ensure the integrity of the exams and that certified applicator credentials are issued only to those who are qualified and certified as competent. Without such assurance, classification for restricted use offers an uncertain level of protection.

If finalized, the requirements for initial certification administration security would be located at 40 CFR 171.103(a) for commercial applicators and at 40 CFR 171.105(e) for private applicators. The requirement for recertification administration security would be located at 40 CFR 171.107(b).

5. *Costs.* Not all States or applicators would be expected to incur costs to implement the aforementioned proposals. For those that do, EPA expects the incremental costs to come into compliance would be minimal (Ref. 3). Many States already check identification at initial certification events and already have proctors for some sessions. The aspects of a secure exam—written, closed-book, proctored, and requiring positive identification of the candidate—would provide the benefit of maintaining the credibility of the certification program, as well as to filter out unqualified candidates.

6. *Alternative options considered by EPA but not proposed.* EPA considered imposing only a requirement to verify the identity of the initial certification and recertification candidates and not codifying the existing policy that requires exams to be proctored and closed book. A requirement to verify a certification or recertification candidate’s identity implemented independently of other exam security requirements could lead to a potential improvement because by verifying that the candidates are the same person seeking the certification, false

attendance at training and exam sessions should decrease. It is also more likely that credentials would be issued to the same candidate that demonstrated competency. However, it is reasonable to expect that the additional burden of implementing closed-book, proctored exams would have substantial additional benefits by ensuring the security of the exams, reducing burden on certifying authorities to update exams after security breaches, and limiting instances where candidates taking an exam can cheat. It is reasonable to expect that the potential benefits of requiring proctored, closed-book exams are sufficient to justify the burden.

7. *Request for comment.* EPA requests comments on the following:

- Should EPA consider allowing an exception to the requirement for candidates to present a government-issued photo identification? If so, under what circumstances? Please provide examples of how an exception could be implemented.

- Should EPA consider any other requirements to improve the security and integrity of applicator certification and recertification exams? If so, please describe.

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

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

1. *Overview.* To improve the protection of noncertified applicators and to reduce the chance for RUP applications to cause unreasonable adverse effects, EPA proposes to require that noncertified applicators working under the direct supervision of a certified applicator receive annual training that covers pesticide labeling, safety precautions, application equipment and techniques, environmental concerns, health effects of pesticide exposure, decontamination, emergency response, and protection of the applicator and the applicator's family. The Agency also proposes exemptions to this training requirement for persons qualified as a trained handler under the WPS or who have passed the core exam covering general standards of competency for commercial applicators, and to require periodic retraining or retesting.

2. *Existing regulation.* FIFRA section 2(e)(4) provides that a noncertified applicator using an RUP must be competent and working under the direction of a certified applicator. The

certified applicator must be available when needed but does not need to be present physically at the application.⁷ U.S.C. 136(e)(4). The regulation establishes: General requirements for the certified applicator to demonstrate a practical knowledge of Federal and State supervisory requirements; that when the certified applicator will not be present during application, he or she must provide instruction to the noncertified applicator, including instructions for proper pesticide applications and how to contact the certified applicator if necessary; and that certain labeling-specific restrictions require the certified applicator to be physically present for the application. 40 CFR 171.2(a)(28) and 171.6.

3. *Stakeholder information considered by EPA.* The need to upgrade the requirements for the supervision of a noncertified applicator by the certified applicator was a major recommendation of the SFIREG 1985 Taskforce report (Ref. 29). The Taskforce concluded that the existing requirements at 40 CFR 171.6 are general in nature and have resulted in some instances where supervision of the noncertified applicator is conducted from locations far removed from the application site. The issue has also been raised to EPA by the PPDC Worker Safety Workgroup and by States at the Pesticide Regulatory Education Program (PREP), which provides an avenue for information sharing between States and EPA about pesticide regulatory issues and programs (Ref. 33). While some States have imposed more stringent supervision requirements or eliminated the option for application of RUPs by noncertified applicators under the direct supervision of a certified applicator, other States' standards are similar to the existing requirement at 40 CFR 171.6.

4. *Details of the proposal/rationale.* EPA proposes to enhance protections for noncertified applicators, *i.e.*, those who use RUPs under the direct supervision of a certified applicator, and to ensure that RUPs are used in a manner that does not pose unreasonable adverse effects to the applicator, bystanders, or the environment by: Expanding the training content, offering alternatives to the training requirement, and requiring periodic retraining.

i. *Expanding training content.* Noncertified applicators have a similar work profile to agricultural handlers under the WPS (40 CFR part 170); both are permitted to mix, load, and apply pesticides with proper guidance from their employer or supervisor. 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. Agricultural handlers must receive training that covers self-protection; hazards associated with pesticide use; format and meaning of pesticide labeling; protection from take home exposure to family members; proper pesticide use, transportation, storage, and disposal; and protections required under the WPS. 40 CFR 170.230(c)(4). In addition, agricultural handlers must be provided a copy of the labeling and any other information necessary to make the application without causing unreasonable adverse effects. The existing part 171 regulation does not require that noncertified applicators receive similar training before applying RUPs under the direct supervision of a certified applicator.

To foster a level of competency appropriate to the responsibilities of noncertified applicators who apply RUPs under the direct supervision of a certified applicator and comparable to the competency currently required of agricultural pesticide handlers, EPA proposes to add the following training requirements for noncertified applicators:

a. Training on information, techniques, and equipment that noncertified applicators need to protect themselves, other people, and the environment before, during, and after making a pesticide application, including all of the following:

- Format and meaning of information contained on pesticide labels and in labeling, including safety information, such as precautionary statements about human health hazards, and hazards of pesticides resulting from toxicity and exposure, including acute and chronic effects, delayed effects, and sensitization.

- Routes by which pesticides can enter the body.

- Signs and symptoms of common types of pesticide poisoning.

- Emergency first aid for pesticide injuries or poisonings.

- How to obtain emergency medical care.

- Routine and emergency decontamination procedures.

- Need for, and appropriate use of, personal protective equipment.

- Prevention, recognition, and first aid treatment of heat-related illness associated with the use of personal protective equipment.

- Safety requirements for handling, transporting, storing, and disposing of pesticides, including general procedures for spill cleanup.

- Environmental concerns such as drift, runoff, and wildlife hazards.

b. Training on all of the following elements, which noncertified applicators need to protect their families from pesticides:

- Warnings against taking pesticides or pesticide containers home.
- Washing and changing work clothes before physical contact with family.
- Washing work clothes separately from the family's clothes before wearing them again.
- Heightened precautions required to protect children and pregnant women.

c. Training on how to report suspected pesticide illness to the appropriate State agency. The proposed training requirements would promote the competence of noncertified applicators who apply RUPs under the direct supervision of a certified applicator by improving their understanding of pesticide labeling, application methods, self-protection, risk mitigation, and general pesticide safety principles. It is reasonable to expect that an understanding of this information, together with the specific instructions for each application from a certified applicator, would provide noncertified applicators with an adequate level of competency to use RUPs without causing unreasonable adverse effects, consistent with the FIFRA requirement that noncertified applicators be competent.

ii. Offering alternatives to the training requirement. In addition to the training proposed in Unit X.A.4.i., EPA proposes to offer two alternative mechanisms for establishing the competency of noncertified applicators who apply RUPs under the direct supervision of a certified applicator: Demonstrating that the noncertified applicator has met the handler training requirements of the WPS (40 CFR 170.230 of the current WPS or 40 CFR 170.201(c) of the proposed revisions to the WPS) or passing the exam on core standards of competency for certified commercial applicators (currently 40 CFR 171.4(b)).

As mentioned in this unit, noncertified applicators working on agricultural establishments and agricultural pesticide handlers have similar job responsibilities. The proposed training for noncertified applicators mirrors the proposed training for agricultural pesticide handlers, except it does not include specific requirements of the WPS. Including a provision in the rule to allow noncertified applicators to meet the training requirement by following the training outlined in this rule or that outlined in the WPS could reduce the burden on noncertified applicators, certified applicators, agricultural pesticide handlers, and agricultural

employers by allowing them to provide substantially similar training to the same audience once, rather than twice, to comply with both regulations. EPA estimates that almost two-thirds of the noncertified applicators under the direct supervision of private applicators will receive WPS training but very few noncertified applicators under the direct supervision of commercial applicators would be covered by WPS training provisions.

The second alternative mechanism, requiring noncertified applicators to pass a written exam covering the core standards of competency for commercial applicators, would also establish an adequate level of competency for noncertified applicators. The commercial applicator core competency standards outlined at 40 CFR 171.4(b) of the existing regulation cover label and labeling comprehension, proper application, potential environmental risks, characteristics of pesticides, application equipment and techniques, and laws and regulations. The content of these core competency standards encompasses the proposed noncertified applicator training content. In some situations, it may be easier or more convenient to allow a noncertified applicator to qualify by taking the core exam than to complete the noncertified applicator training. For example, a person who has taken and passed the core exam and failed the category exam, which generally has a lower pass rate, would not be certified as a commercial applicator but would have demonstrated sufficient competency to apply RUPs under the direct supervision of a certified applicator. Allowing such a person to qualify as a noncertified applicator based on passing the core exam rather than requiring that he or she undergo another training program would reduce the potential burden on noncertified applicators and their employers without sacrificing protection of the noncertified applicators, the public, or the environment.

iii. Requiring periodic retraining. EPA proposes to implement a requirement to refresh the qualifications of noncertified applicators. Noncertified applicators who qualified through a training program, either as proposed under 171.201(d) or as a handler under the WPS, would be required to undergo retraining annually. Noncertified applicators who recertify by passing the commercial applicator core exam would be required to requalify every 3 years. The proposed training requirement for noncertified applicators who would apply RUPs under the direct supervision of a certified applicator is

comparable to the training required for agricultural pesticide handlers. EPA has proposed a requirement under the WPS for handlers to receive pesticide safety training annually. EPA will ensure that the final requirements for noncertified applicator training under the certification rule are consistent with the final requirements for WPS handler training where applicable. It is reasonable to expect that noncertified applicators must maintain an ongoing level of competency similar to that required of certified applicators. However, neither of the options to qualify by attending a training program requires passing a written exam or attending a training course covering the proposed enhanced competency standards for private applicators. Therefore, the proposed noncertified applicator training programs would not provide the same assurance of competency as the certification process for commercial and private applicators. For these reasons, it is reasonable to expect that noncertified applicators who qualify through training should receive training every year rather than every 3 years as proposed for the recertification of certified private and commercial applicators.

States require certified applicators to demonstrate continued competency through recertification programs; noncertified applicators who establish competency must also demonstrate that they maintain a level of competency to apply pesticides without unreasonable adverse effects. An annual training requirement would be consistent with the proposed training interval for agricultural handlers (Ref. 4), thereby decreasing the burden on agricultural employers to track two training timeframes. Additionally, studies have shown that training participants begin to forget the content of the training almost immediately, that often 90% or less of the training is remembered at 1 year after training, and that knowledge from training on skills and decision making deteriorates more quickly than information from training on repetitive physical tasks (Ref. 14). Further, studies have demonstrated the effectiveness of periodic retraining on retention of the knowledge necessary to implement self-protective measures (Ref. 15).

Noncertified applicators who qualify through passing the core exam for commercial applicators would be required to requalify every 3 years. Passing the core exam provides an assurance of competency similar to that required of certified applicators. Therefore, it is reasonable to expect that noncertified applicators who pass the core exam would maintain their

competency on the topics covered for a similar length of time as commercial applicators. EPA is proposing a requirement for all certified applicators to renew their credentials every 3 years.

The regulatory text related to these proposals would be located at 40 CFR 171.201(c) and (d).

5. *Costs.* Because noncertified applicators working under the direct supervision of commercial applicators and private applicators have different wage rates, the costs are presented separately for noncertified applicators working under the direct supervision of a commercial applicator and for noncertified applicators working under the direct supervision of a private applicator (Ref. 3).

i. *Noncertified applicators working under the direct supervision of a commercial applicator.* EPA estimates the cost of the proposed requirement to require noncertified applicators to either complete the proposed training, be handlers under the WPS, or pass the core exam would be about \$6.6 million per year for noncertified applicators working under the direct supervision of a commercial applicator (Ref. 3).

ii. *Noncertified applicators working under the direct supervision of a private applicator.* EPA estimates the cost of the proposed requirement to require noncertified applicators to either complete the proposed training, be handlers under the WPS, or pass the core exam would be about \$639,000 per year for noncertified applicators working under the direct supervision of a private applicator (Ref. 3).

6. *Alternative options considered by EPA but not proposed.* EPA considered four alternatives to this proposal.

i. *Allow States to determine noncertified applicator training content.* EPA considered allowing each State to determine what training or qualifications are appropriate for noncertified applicators, rather than adhering to the standard established in this proposal. For example, some States have specific requirements for noncertified applicators to be qualified, such as through an apprenticeship program, or completing a State-developed training program or minimum number of hours of privately-provided training. Although the State programs with various requirements may adequately ensure the competency of noncertified applicators, allowing States to adopt varying standards would result in classification for restricted use providing differing levels of protection from State to State. In order to ensure that RUPs are used by competent persons in a way that would not cause unreasonable adverse effects, it is

necessary for noncertified applicators to receive instruction that covers a specific set of basic competency information. The consistent minimum standard would not be met if States adopted their own programs that did not meet or exceed the standards proposed by EPA.

EPA recognizes that State programs may adequately prepare a noncertified applicator to use pesticides effectively and without unreasonable adverse effect on human health or the environment. However, under the proposed option, States can modify existing programs to ensure they cover the content and requirements of the proposed standard and do not need a specific exception. If the State training program provides instruction on the training requirements listed above, the supervising certified applicator would still be required to verify that the noncertified applicators working under his or her direct supervision have received the training. The proposed option balances flexibility for States to adopt more stringent standards with the need to ensure that noncertified applicators meet a consistent standard of competency.

ii. *Require all noncertified applicators to pass the core exam.* EPA considered requiring all noncertified applicators to pass the core exam for commercial applicator certification. The current requirements concerning the core exam for commercial applicators covers all the topics that would help ensure general knowledge of pesticide application by noncertified applicators.

The Agency decided against proposing a requirement that noncertified applicators demonstrate competence only by taking the core exam for commercial applicators because in some instances, that requirement may impose additional burden on the certified applicators and the noncertified applicators. Some noncertified applicators may have a more difficult time preparing for and passing a written exam than meeting training requirements. Although noncertified applicators may be able to demonstrate their competency to make applications without unreasonable adverse effects with proper supervision, some noncertified applicators may have literacy and language issues that would stand in the way of passing a written exam. By limiting a noncertified applicator's options for demonstrating competence to passing a written exam, the number of noncertified applicators available could decrease because fewer people would qualify. A decrease in the number of noncertified applicators available would increase costs because certified applicators would be required to perform the applications themselves.

In addition, States would have to administer approximately five times the current number of exams, increasing their administrative burden.

EPA decided not to propose this option because it would impose a significant burden on noncertified applicators, the supervising certified applicators, and the States, and the benefits associated with the alternate options do not appear to justify the burden.

iii. *Establish different standards for noncertified applicators working under the direct supervision of commercial and private applicators.* EPA considered establishing separate standards for noncertified applicators under the direct supervision of commercial and private applicators. Under this alternative, noncertified applicators working under the direct supervision of a private applicator would be required to complete the proposed training or the training for handlers under the proposed revisions to the WPS (Ref. 4). EPA considers this to be the minimum level of training that could reasonably be expected to prevent unreasonable adverse effects associated with the use of RUPs. EPA considered requiring a higher level of training for noncertified applicators working under the direct supervision of a commercial applicator; specifically, EPA considered requiring them to pass the core exam for certified applicators as described in the alternate option discussed in this unit.

EPA decided not to propose this alternative for two reasons. First, EPA does not believe there is a significant difference in the risks faced by, or posed by, a noncertified applicator under the direct supervision of a private applicator and a noncertified applicator under the direct supervision of a commercial applicator. As the risks appear to be the same, the same level of training seems appropriate. Second, having a single standard would allow noncertified applicators to work for both commercial and private applicators without having to meet different standards.

iv. *Implement longer retraining interval.* Lastly, EPA considered requiring all noncertified applicators to be retrained using the same timeframes as certified applicator recertification (currently proposed as every 3 years, see Unit XIV.). However, commercial applicators are required to demonstrate their competency through a written exam; the more rigorous standard establishes a higher level of confidence in commercial applicators' knowledge and ability to protect themselves, the public, and the environment. Training is a less reliable indicator of competency

than passing an exam and knowledge from training deteriorates rapidly (Refs. 14 and 15). EPA recognizes a distinction between the noncertified applicators that qualify through training and those that qualify through an exam. That distinction and EPA's confidence in the exam process prompted EPA to reject the option to establish the same requalification timeframe for all noncertified applicators parallel to the recertification period for certified applicators.

7. *Request for comment.* EPA requests specific feedback on the following:

- Should EPA allow States to adopt noncertified applicator training programs different than what EPA proposes? If so, please explain why, and how portability of the varied programs might be addressed.

- Should EPA require States to adopt the proposed noncertified applicator training program and allow States to add other qualifications or requirements?

- Should EPA require noncertified applicators to receive training specifically on avoiding harm to pollinators? If so, please explain what additional information should be included in the training and why.

- Are there other points that EPA should include in the noncertified applicator training outlined in the proposal? If so, what points should be added and why?

- Should EPA consider a single requalification interval for all noncertified applicators, regardless of their method of qualification, *i.e.*, should EPA consider requiring noncertified applicators who qualify by passing the core exam to requalify annually, or for those who qualify by training to requalify every 3 years? Please explain why.

- Please provide any available data on or sources of information for the number of noncertified applicators who apply RUPs under the direct supervision of commercial and private applicators.

B. Establish Qualifications for Training Providers

1. *Overview.* In order to ensure that noncertified applicators receive training that communicates the nature of their work and the potential risks of pesticide exposure in a manner they understand, EPA proposes to require that noncertified applicator training be provided by a currently certified applicator, a State-designated trainer of certified applicators, or a person who has completed a train-the-trainer course under the WPS.

2. *Existing regulation.* The rule has no requirement for training and therefore, no restrictions on who may provide training to noncertified applicators.

3. *Stakeholder information considered by EPA.* Stakeholders, including the PPDC, State associations, and CTAG, have noted the similar work profiles between WPS handlers and noncertified applicators working on agricultural establishments. They recommended that noncertified applicator trainers have similar qualifications to WPS handler trainers because of the importance of conveying information related to safe pesticide use, understanding labeling requirements, and how to contact the employer in the event of an emergency.

4. *Details of the proposal/rationale.* EPA proposes to allow noncertified applicators to receive training from an applicator with a valid certification issued under 40 CFR part 171, a State-designated trainer of certified applicators, or a person who has completed a pesticide safety train-the-trainer program under the WPS, 40 CFR part 170. Given the elevated risks associated with applying RUPs, it is critical to have a high level of confidence in the competence of those who will make applications. Commercial applicators have to pass a written exam to demonstrate their competency. The qualifications of the trainer become more important where the competency of noncertified applicators is established through training rather than through passing a written exam. It is important to have the information presented by trainers who are knowledgeable about pesticide safety requirements.

Certified applicators supervising noncertified applicators have knowledge of the information necessary to ensure that applications are made effectively and without unreasonable adverse effects and commercial applicators have passed an exam demonstrating their competency. The core standards of competency for both private and commercial applicators would cover supervising noncertified applicators using RUPs, including how to convey information about proper application techniques, understanding the labeling, and contacting the supervisor if necessary. In addition, the competency standards would cover communicating with noncertified applicators in a manner they understand. State designated trainers, mainly cooperative extension service pesticide safety educators and county agents, have expertise in educating adult populations about how to conduct pesticide applications and the risks

associated with pesticide exposure. Lastly, trainers who have undergone a train-the-trainer program have learned techniques to effectively transfer information on application techniques, risks of exposure, and other necessary information required to protect agricultural handlers before, during, and after application. EPA anticipates that most people likely to be training noncertified applicators would already be within one of the aforementioned categories of qualified trainers.

The regulatory text related to this proposal would be located at 40 CFR 171.201(d)(2).

5. *Costs.* EPA expects this proposal to have negligible cost. Certified applicators are qualified as trainers by virtue of their certification and would not incur any additional costs to be qualified under this proposal (Ref. 3). EPA assumes most training would be provided by certified applicators to noncertified applicators working under their direct supervision. Therefore, EPA does not believe many people who are not already certified applicators would seek to be qualified trainers under this proposal. Allowing State-designated trainers of applicators and those who have completed a WPS pesticide safety train-the-trainer program would provide flexibility to the certified applicators and offer a variety of options to ensure noncertified applicators are trained.

C. Establish Qualifications for Certified Applicators Supervising Noncertified Applicators

1. *Overview.* In order to ensure that noncertified applicators do not apply RUPs in a manner that would cause unreasonable adverse effects, EPA proposes to establish specific requirements for the supervising applicator.

2. *Existing regulation.* The current regulation requires supervising certified applicators to demonstrate a practical knowledge of Federal and State supervisory requirements related to the application of RUPs by noncertified applicators. 40 CFR 171.6(a). In addition, the current rule requires the availability of the certified applicator and the hazard of the situation to be directly related. 40 CFR 171.6(a). For certain products, the labeling requires the applicator to be on-site for the application or prohibits application by noncertified applicators even under the direct supervision of a certified applicator. Wherever noncertified applicators are applying RUPs under the direct supervision of a certified applicator, the existing regulation requires the certified applicator provide verifiable instruction to the noncertified

applicator, which includes detailed guidance for applying the pesticide properly, and provisions for contacting the certified applicator in the event that he or she is needed. 40 CFR 171.6.

3. *Stakeholder information considered by EPA.* States indicated overall support for establishing qualifications for certified applicators supervising noncertified applicators; however they noted that some limitations would be impractical or difficult to enforce (Ref. 33). For example, States noted that they would not be able to verify whether the supervising applicator was within a certain distance or time of the noncertified applicator conducting the application, and it would be impossible to note how many noncertified applicators were working under the direct supervision of a certified applicator at one time (Ref. 33). The SBAR panel recommended that EPA require “communication capability between certified applicators and those under their supervision during RUP applications” (Ref. 34).

4. *Details of the proposal/rationale.* EPA proposes to require that certified applicators who supervise noncertified applicators to be certified in the category of the supervised application in order to protect the noncertified applicator and the environment from risks associated with insufficient supervision or qualification. EPA proposes to require that certified applicators ensure that noncertified applicators under their direct supervision have satisfied one of the qualification methods discussed in Unit X.B. For specific applications, EPA proposes to require the certified applicator to provide a copy of all applicable labeling to each noncertified applicator for each supervised application; ensure that means are available for immediate communication between the certified applicator and the noncertified applicators working under their direct supervision; provide specific instructions related to each application, including the site-specific precautions and how to use the equipment; and explain and comply with all labeling restrictions.

It is critical that the supervising applicator be competent in the specific types of application that he or she is supervising, know the requirements related to application of RUPs by noncertified applicators, and ensure that noncertified applicators are competent. It is reasonable to expect that many supervising applicators currently provide instruction to the noncertified applicators under their supervision and are certified in the appropriate category.

The proposed change would codify more precise requirements to ensure that supervising certified applicators are prepared adequately to supervise specific types of applications and to provide the appropriate protections to noncertified applicators.

EPA proposes to add a requirement for the certified applicator to provide a copy of the labeling to noncertified applicators applying RUPs under his or her supervision. Providing the product labeling to noncertified applicators is important for several reasons. First, product labeling communicates critical information to the pesticide user on how to use and apply the product. The labeling contains use directions, health and safety information, and instructions for proper storage and disposal. By law, users must follow the use instructions on the labeling for registered products. Second, in the event that the noncertified applicator cannot contact the supervising applicator, the labeling contains critical information that the noncertified applicator or a literate person nearby could consult in order to understand special use restrictions, make a proper application, or respond in the event of a spill or accident, including providing proper medical treatment. Third, the WPS requires employers to provide handlers access to the product labeling during handling activities in order to provide protections parallel to those provided under the Occupational Safety and Health Act (OSHA). OSHA requires that persons with hazardous chemicals in their work area receive information in the form of labels, training, and access to safety data sheets (SDSs). Label and SDSs must always be available; training must take place at the time of the employee’s initial assignment and when new hazardous chemicals are introduced into the work area. Fourth, noncertified applicators have similar job responsibilities to agricultural pesticide handlers under the WPS and have an equal need for labeling information. For these reasons, it is important to make the labeling available to all noncertified applicators working with RUPs, even if some may not be able to read or understand the labeling.

Communication between the supervising applicator and the noncertified applicator is critical if the noncertified applicator has a question before application or encounters an emergency situation related to the misapplication. The current rule requires provisions for contacting the certified applicator, but it is very general and provides no assurance of timely contact. The intent of the existing provision was to enable communication

between the supervising applicator and the noncertified applicator throughout the application process.

Telecommunications options have improved dramatically over the last 35 years, and the proposed requirement to ensure means are available for immediate communication would take advantage of those changes to more fully accomplish the intent of the original provision. Requiring means to be available for immediate communication would allow flexibility for the supervising applicator; if the certified and noncertified applicator are working at the same location, means for immediate communication could be speaking to one another directly. In the event the noncertified applicator is using RUPs under the direct supervision of a certified applicator when the certified applicator is not present, means of immediate communication could include cellular phones or two-way radios, among other mechanisms.

The regulatory text related to this proposal would be located at 40 CFR 171.201(b).

5. *Costs.* EPA assumes that the current requirement to provide detailed guidance for applying the pesticide properly and the proposed requirement to provide application-specific instructions are substantially similar and will not result in a significant increase in the cost of compliance (Ref. 3).

EPA estimates the cost for ensuring means for immediate communication are available would be negligible because according to CTIA—The Wireless Association, as of December 2012, wireless penetration in the United States was 102% (the number of wireless subscriptions divided by the U.S. population) (Ref. 56).

6. *Alternative options considered by EPA but not proposed.* EPA considered different application-specific requirements for supervising applicators, including a requirement for the supervising applicator to keep noncertified applicators within their line of sight or to be on site during applications, a limit on the number of noncertified applicators that could be supervised at one time, or a limit on the distance between the certified applicator and the noncertified applicators.

EPA may limit who may apply RUPs and the type of supervision required on a product-by-product basis. Some RUP labeling requires certified applicators to keep noncertified applicators within their line of sight during applications. EPA considered requiring line of sight supervision wherever noncertified applicators are applying RUPs under the

direct supervision of a certified applicator. For example, labeling for fumigant products requires the supervising applicator to be on site because of the significant danger to the applicator if not used properly. However, a universal requirement that certified applicators keep noncertified applicators in their line of sight or to be on site during application would be inconsistent with 7 U.S.C. 136(e)(4), which allows use of RUPs even if the certified applicator providing direct supervision is not on site at the time of application.

EPA considered establishing a limit on the number of noncertified applicators that a certified applicator could supervise for each application of RUPs, *e.g.*, 10 noncertified applicators could use RUPs under the direct supervision of a certified applicator at any specific time. Limiting the number of noncertified applicators using RUPs under the direct supervision of a certified applicator could better ensure that the applications are conducted in a manner that would not cause unreasonable adverse effects to the applicator, the public, or the environment. EPA does not have information on the maximum number of noncertified applicators that a certified applicator could supervise without causing unreasonable adverse effects. There may be limits on the capability of a certified applicator to supervise noncertified applicators using RUPs, but the limits seem circumstantial. For example, a certified applicator supervising the application of RUPs through backpack sprayers on a single agricultural establishment may be able to supervise many noncertified applicators without causing unreasonable adverse effects. However, a certified applicator supervising noncertified applicators fumigating a warehouse with RUPs may not be able to supervise other applications of RUPs at the same time in a safe manner.

EPA chose not to propose a limit on the number of noncertified applicators that can use RUPs under the direct supervision of a certified applicator. EPA regulates specific risks related to the use of RUPs on a product by product basis, including limiting or restricting the use of RUPs by noncertified applicators. The certified applicator is liable for all applications conducted under his or her supervision. To become certified, applicators must demonstrate competency in conducting and supervising applications in a manner that will not result in adverse effects to human health or the environment. It is reasonable to expect that the certified applicator will generally recognize the

limits of his or her capacity to appropriately supervise multiple noncertified applicators. It is reasonable to expect that the combination of certified applicators' competency in making and supervising applications of RUPs, product-specific limitations on the use of RUPs by noncertified applicators, combined with the proposed requirement that the supervising applicator ensure that a mechanism for communication between certified applicators and noncertified applicators using RUPs under their direct supervision, would adequately protect the noncertified applicator, the public, and the environment. Recognizing that EPA has insufficient data to support a limit on the number of noncertified applicators that can be supervised by a certified applicator or data to establish the number if a limit is required, EPA is soliciting additional information related to this option.

EPA also considered proposing a maximum physical distance or travel time between the certified applicator and noncertified applicator using RUPs under his or her direct supervision. For instance, the certified applicator would have to be within X yards or Y minutes of the noncertified applicator. This option would make it more likely that the certified applicator could physically reach the noncertified applicator within a reasonable timeframe in the event assistance was needed. Time-based and distance-based limitations would have different impacts in urban and rural areas—in a city, the certified applicator might take an hour to get to an application site within 5 miles, whereas in a rural area, the applicator could cover the same distance in a few minutes. EPA does require the supervising certified applicator to be on site when certain RUPs are used by noncertified applicators. These restrictions are imposed on a product by product basis. EPA does not have sufficient information on a specific time or distance between certified applicators and noncertified applicators using RUPs under their direct supervision that would make meaningful reductions in the overall risk of adverse effects from RUP use by noncertified applicators. Rather than set an arbitrary time or distance, EPA chose to propose a requirement for the certified applicator to ensure a mechanism for the supervisor and noncertified applicator using RUPs under his or her direct supervision to be in immediate communication. It is reasonable to expect that ensuring that noncertified applicators are able to immediately contact their supervisors in the event of

a spill, emergency, or question about the application would reduce the potential for unreasonable adverse effects from RUP application by noncertified applicators.

7. *Request for comment.* EPA requests specific comment on the following:

- Would supervising certified applicators and noncertified applicators rely on cell phones rather than two-way radios as a means to ensure immediate communication?
- Please provide any additional information that would assist EPA in more accurately estimating the cost associated with this proposal.
- Should EPA consider other qualifications for supervising applicators? If so, what qualifications and why?
- Should EPA require certified applicators to be within a certain distance or time of the noncertified applicators using RUPs under their direct supervision? Please explain why. If so, what distance or time should EPA require?
- Should EPA limit the number of noncertified applicators that a certified applicator can supervise? Please explain why. If so, how should EPA select the maximum number?

XI. Expand Commercial Applicator Recordkeeping To Include Noncertified Applicator Training

1. *Overview.* In order to facilitate inspectors' ability to verify that noncertified applicators have been trained in accordance with the rule, EPA proposes to require commercial applicators to maintain records of noncertified applicator training for two years.

2. *Existing regulation.* The current rule does not require any person to keep records of the information or training provided to noncertified applicators.

3. *Details of the proposal/rationale.* EPA proposes to require commercial applicators to maintain records of noncertified applicators' training. The proposed recordkeeping requirement includes: The trained noncertified applicator's printed name, and signature; the date of the training; the name of the person who provided the training; and the supervising commercial applicator's name. It is reasonable to expect that requiring commercial applicators to maintain records of noncertified applicators' training would increase the likelihood that the noncertified applicators will be trained in accordance with the proposed requirements. In addition, records can help ensure that noncertified applicators meet the proposed minimum age requirement. Records are

a key component of an effective enforcement program. EPA is not proposing to require commercial applicators to document the qualifications of noncertified applicators who satisfy the requirement of 40 CFR 171.201(c) as agricultural handlers or by having passed the core exam. The WPS already requires agricultural employers to maintain records of pesticide safety training provided to handlers. It is reasonable to expect that certifying authorities would be able to verify whether a noncertified applicator has passed the core exam.

FIFRA prohibits EPA from issuing regulations that require private applicators to maintain records. Therefore, EPA is not proposing to make the recordkeeping requirements outlined in this Unit apply to private applicators. Nevertheless, private applicators still would be subject to the proposed requirements for ensuring that noncertified applicators under their direct supervision have met the proposed training requirements. In the absence of training records maintained by private applicators, EPA would gauge compliance with the training requirement during routine compliance inspections. The inspector could question noncertified applicators regarding the content of the training and the labeling of any products being applied. If the noncertified applicators' answers are not consistent with the content of the required training and the labeling of any products being applied, it may support a presumption that the private applicator has failed to adequately comply with the noncertified applicator training requirement. Where private applicators keep records, either on their own initiative or in response to State, Tribal, or local requirements, that are sufficient to verify compliance with the requirements for training and supervising noncertified applicators, EPA expects that it would ordinarily rely on such records to assess compliance, rather than evaluating individual noncertified applicators.

The regulatory text related to this proposal would be located at 40 CFR 171.201(e).

4. *Costs.* EPA estimates the cost of the proposal to require commercial applicators to maintain records of the training provided to noncertified applicators working under their direct supervision for 2 years would be \$324,000 annually (Ref. 3).

5. *Alternative options considered by EPA but not proposed.* EPA considered requiring the training record to include the noncertified applicator's date of birth. The Department of Homeland

Security (DHS) requires every employer to have a completed I-9 form for every employee. The I-9 form already requires employers to obtain and keep records on a number of pieces of information about the employee to verify employability, including the employee's date of birth. The employer must retain the I-9 form for inspection by DHS or other federal agencies. Rather than impose a duplicative requirement for recordkeeping on employers, EPA chose not to propose a requirement for the training record to include the noncertified applicators date of birth.

6. *Request for comment.* EPA requests specific comment on the following:

- Should EPA consider requiring the commercial applicator to provide a copy of the training record to the noncertified applicator? What would be the value of this record to the noncertified applicator and subsequent employers? Should EPA require the record to be provided to all noncertified applicators as a matter of course or only to those noncertified applicators who request such documentation from the certified applicator?

- Should EPA consider requiring commercial applicators to maintain records of noncertified applicator training for a different length of time? If so, for how long should training records be maintained and why?

- Should EPA consider requiring commercial applicators to document the noncertified applicator's qualification regardless of the method used to qualify? Should EPA require commercial applicators to document the WPS training or core exam? If so, why?

XII. Establish a Minimum Age for Certified Applicators

1. *Overview.* In order to reduce the risks of exposure to applicators, bystanders, the public, and the environment, EPA proposes to establish a minimum age of 18 for any person to become certified as a private or commercial applicator.

2. *Existing regulation.* The rule has no age restrictions for certified applicators.

3. *Stakeholder information considered by EPA.* Stakeholders including Farmworker Justice, Migrant Clinicians Network, EPA's Children's Health Protection Advisory Committee, members of the PPDC workgroup, and State regulatory agencies recommended establishing a minimum age for pesticide applicators.

In 2002, CTAG surveyed State lead agencies for pesticide applicator certification. Responses were provided from 49 States, with 30 States implementing a minimum age for commercial applicators and 27 States

establishing a minimum age for private applicators. The commercial applicator minimum ages were 16 (6 States) and 18 (24 States); the private applicator minimum ages ranged from 15 to 18 (15 years, 1 State; 16 years, 10 States; 17 years, 1 State; 18 years, 15 States) (Ref. 57). CTAG also evaluated State support of a minimum age requirement for applicator certification. Ninety-eight percent of the respondents supported such a requirement. Twenty-six States supported a minimum age of 18, 12 States supported a minimum age of 16, and the remainder did not respond with a specific age or provided different required minimum ages, depending on type of certification (Ref. 57).

As of 2013, 35 States had implemented a minimum age of 18 for commercial applicators and 8 States had implemented a minimum age of 16 for commercial applicators. For private applicators, 16 States established a minimum age of 18, 1 State established a minimum age of 17, and 17 States established a minimum age of 16 (Ref. 3).

The SBAR panel recommended that EPA consider a minimum age of 18 for commercial and private applicator certification, with an exception allowing private applicators working on a farm owned by an immediate family member (as defined in the WPS at 40 CFR part 170) to be certified at 16 years old (Ref. 34). The SERs (including pesticide applicators, farmers, and other business owners) consulted by the panel had varying recommendations regarding minimum age.

For commercial applicators, SERs mainly suggested a minimum age of 18, noting that the minimum age for a pilot license is 18 so it would not impact aerial applicators and that "one cannot understand the concept of safe and accurate application until age 18." Other SERs suggested that the minimum age should be 16 for children of farmers, that the minimum age should not exceed 14, and that there should be no minimum age—only a requirement to pass a written test (Ref. 34).

For private applicators, recommendations ranged from no minimum age to a minimum age of 18. Two SERs suggested that there should be no minimum age, with one suggesting that children be certified as private applicators when they pass a test. Three representatives suggested a minimum age of 16. One SER suggested a minimum age of 18 (Ref. 34). Two SERs noted that establishing a minimum age would require farm owners to hire certified applicators, increasing the cost of RUP applications (Ref. 34).

DOL has established a general rule, applicable to non-agricultural employment, that workers must be at least 18 years old to perform hazardous jobs. 29 CFR 570.120. For example, those under the age of 18 may not perform most tasks in manufacturing or mining industries; communications or public utilities; construction or repair; in transporting people or property; and in warehousing and storage. The FLSA establishes a minimum age of 16 for youth in agriculture engaged in occupations deemed hazardous by the Secretary of Labor. 29 U.S.C. 213(c)(2). This includes persons handling toxicity category I and II pesticides in agriculture. 29 CFR 570.71(a)(9). By regulation, DOL prohibits youth under the age of 16 engaged in nonagricultural employment from any work involving pesticides unless employed by a parent or someone standing in place of the parent. 29 CFR 570.32.

4. *Details of the proposal/rationale.* EPA proposes to establish a minimum age of 18 for persons to become certified as commercial and private applicators.

Aside from any increased risks that adolescents may suffer from pesticide exposures, adolescents generally lack the experience and judgment to avoid or prevent unnecessary exposure. A study conducted by the National Institutes of Health (NIH) also demonstrates that because their brains are still developing, adolescents may have trouble balancing risk-reward decision-making and goal-oriented decision-making (Ref. 21). Although adolescents may understand the possible consequences of their actions, they are more likely to make decisions based upon their initial emotional responses, which will often lead them to make suboptimal choices (Ref. 20). Additionally, adolescents are less likely to be aware of their rights and how to recognize hazards in the workplace (Ref. 20).

Pesticide applicators must exercise good judgment and responsible behavior to best protect themselves and others as they work with these potentially toxic materials. Research has shown differences in the decision making of adolescents and adults that reasonably supports the conclusion that applicators who are children 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. 22). Decision-making skills and competence differ between adolescents and adults. A NIOSH compilation of studies demonstrates “[y]outh are at increased risk of injury from lack of experience. Inexperienced workers are unfamiliar with the requirements of work, are less likely to be trained to recognize hazards, and are commonly unaware of their legal rights on the job. Developmental factors—physical, cognitive, and psychological—may also place them at increased risk” (Ref. 21). While some research has focused on decision-making of adolescents in terms of legal culpability, the findings on decision-making skills and competence can be applied reasonably to pesticide application.

Society has established 18 as the age of majority in many circumstances, and research has shown that by 18 years old, most people have developed a level of competence that makes responsible decision making more likely. For example, persons must wait until they are 18 to vote, join the military, use tobacco, and give medical consent. For the one major exception to 18 as the age of majority, issuance of driver’s licenses, States have recognized the increased risks associated with new, immature drivers. Forty-nine States have established a graduated driver’s license program, under which the young drivers do not get full rights and independence upon passing the necessary tests; rather they get limited privileges that expand over time to result in full rights and independence when they reach 17 or 18 years old. Overall, this approach has resulted in fewer accidents by teenage drivers between 16 and 18 years old (Refs. 58 and 59). Society does not entrust individuals with the right to conduct some high risk activities until they have met a certain age because the risk of harm to the underage person and others is too great. Pesticide application presents comparable risks, with the potential for significant harm to the applicator, the public, and the environment.

In addition to differences between adolescents and adults in terms of decision-making ability, children may be more susceptible to pesticides because their physiological systems are developing, and that development may be altered by pesticide exposure. Most pesticides classified as RUPs are so classified based on an increased

potential for acute harm to human health. A level of exposure to RUPs considered safe for an adult may not be safe for a child.

EPA expects that restricting certification to persons 18 years of age or older would prevent children from being exposed while performing and supervising application activities and protect other persons and the environment from misapplication due to children’s poor judgment or inadequate decision-making skills. EPA’s proposal would harmonize the age requirements for pesticide applicators with the minimum age requirements for workers performing hazardous jobs in other industries.

The regulatory text for these provisions would be located at 40 CFR 171.103(a)(1) for commercial applicators and at 40 CFR 171.105(d) for private applicators.

5. *Costs.* EPA separates the cost of establishing a minimum age for commercial and private applicators in this unit.

i. Commercial applicators. EPA estimates the cost of establishing a minimum age of 18 for commercial applicators would be \$294,000 per year (Ref. 3). The costs would reflect the difference in the wage rates between commercial applicators who are 18 years or older and those who are younger in States that do not currently have a minimum age of 18 (Ref. 3). As discussed in this unit, many States already have a requirement that certified applicators must be at least 18 years old.

ii. Private applicators. EPA estimates the cost of establishing a minimum age of 18 for private applicators would be \$174,000 per year (Ref. 3). The costs would reflect the difference in the wage rates between private applicators who are 18 years or older and those who are younger in States that do not currently have a minimum age of 18.

6. *Alternative options considered by EPA but not proposed.* EPA considered two alternatives: Allowing flexibility in the minimum age of 18 for applicators on a family farm, and establishing a minimum age of 16 for commercial and private applicators.

EPA took into account the recommendation of the SBAR panel that EPA consider a minimum age of 18 for commercial and private applicator certification, with an exception allowing private applicators working on a farm owned by an immediate family member (as defined in the WPS at 40 CFR part 170) to be certified at 16 years old (Ref. 34). This option would allow flexibility for earlier certification for private applicators working on farms owned by immediate family members; however, it

provides a different level of protection for private and commercial applicators and to those who would be impacted by their applications of RUPs. EPA's primary concern is the protection of human health and the environment from pesticide hazards; the SBAR panel alternative does not adequately protect a vulnerable segment of the population, youths 16 and 17 years old. It also puts at risk neighbors, bystanders, and the environment. RUPs pose greater potential for unreasonable adverse effects if they are misused than do other pesticides. Persons younger than 18 may possess less maturity and good judgement than adults, and they may be careless in making applications. It is reasonable to expect that there would be additional risk to the applicator, the public, and the environment from RUP applications by persons younger than 18, and despite the benefit of flexibility offered by a reduced minimum age on family owned enterprises, EPA does not consider that flexibility justified in light of the associated risks.

The second alternative considered by EPA was to set a minimum age of 16 for persons to become certified as commercial or private applicators. This option would require fewer States to incorporate the new requirement because most States have a minimum age of at least 16. Under this alternative, States could adopt or retain a requirement for a higher minimum age. In addition, a minimum age of 16 would match the requirements of the FLSA for handling or applying products in toxicity category I and II in agricultural employment and the minimum age for handlers under the proposed changes to the WPS (Ref. 4). However, this option would provide significantly less protection to the applicator, the public, and the environment. Moreover, this option could create a scenario in which a minor could be directing the actions of an adult by supervising the application of RUPs. States have noted that it can be difficult to take enforcement actions against minors. Under this scenario, States may have no recourse if the pesticide was misapplied by the noncertified applicator because responsibility ultimately rests with the certified applicator, in this case, a minor. Certified applicators use RUPs, pesticides with a higher potential for harming human health and the environment, and must possess an appropriate level of competence, maturity and decision-making skills to ensure these products are used safely. Therefore, EPA does not believe that the difference in cost between the proposed option and this alternative justifies the

associated risk to youth applicators, the public, and the environment.

7. *Request for comment.* EPA specifically requests comment on the following questions:

- Are there alternatives that have not been considered that would improve protections for adolescent certified applicators using RUPs, either those under 16 or 18 years old, while allowing flexibility for pesticide use for agriculture?

- What would be the impact on State programs of establishing a minimum age of either 16 or 18 for certified applicators? What would be the impact on pesticide application businesses?

- Are there additional benefits or burdens associated with establishing a minimum age of 16 or 18 for certified applicators? If so, please provide data to support either position.

- Would this proposal have an impact on training programs for adolescents? If so, please describe the impact.

- Is there a need for an exemption from the minimum age requirement for persons working on a farm owned by their immediate family members? If so, how widespread is this need and what are its economic impacts? What criteria should EPA consider if it creates such an exemption, e.g., size of the farm, specific familial relationship, whether a family member/owner is also a certified applicator? Should EPA use the same criteria established for the exemption for owners and their immediate family members under the WPS (see 40 CFR 170.104(a) and 170.204(a))?

XIII. Establish a Minimum Age for Noncertified Applicators Working Under the Direct Supervision of Certified Applicators

1. *Overview.* EPA proposes to require that noncertified applicators who use RUPs under the direct supervision of a certified applicator be at least 18 years old. EPA expects this change would result in reduced risks to children and improved competency in the use of RUPs, resulting in reduced exposure to noncertified applicators, bystanders, and the environment.

2. *Existing WPS regulations.* The current rule does not establish a minimum age for noncertified applicators.

3. *Stakeholder information considered by EPA.* As of 2013, 16 States had implemented a minimum age of 18 for noncertified applicators under the direct supervision of commercial applicators and 4 States had implemented a minimum age of 16 for noncertified applicators under the direct supervision of commercial applicators. For private applicators, 5 States

established a minimum age of 18 and 2 States established a minimum age of 16. Two States prohibit use of RUPs by noncertified applicators, eliminating the option for use of RUPs under the direct supervision of a certified applicator (Ref. 3).

The SBAR panel recommended that EPA consider a minimum age of 18 for noncertified applicators working under the direct supervision of commercial applicators and a minimum age of 16 for noncertified applicators working under the direct supervision of private applicators (Ref. 34). The SERs consulted by the panel provided varied recommendations. One SER recommended that EPA adopt a minimum age of 16 for persons working in an apprentice program, but prohibit these noncertified applicators from working alone (i.e., supervising applicator not present at the site of application). Another SER suggested a minimum age of 18 because "one cannot understand the concept of safe and accurate application until age 18." A third SER suggested that EPA not establish a minimum age because establishments applying RUPs need to use family members. Finally, one SER supported EPA's adoption of either a requirement for training for noncertified applicators or a requirement for certified applicators to be present for applications made under their direct supervision (Ref. 34). EPA also considered the information discussed in Unit XII.3.

4. *Details of the proposal/rationale.* EPA proposes to establish a minimum age of 18 for noncertified applicators using RUPs under the direct supervision of certified applicators. The proposed age restriction would include a requirement for commercial applicators supervising the noncertified applicator to record the training and the birth date of any noncertified applicator using RUPs under their direct supervision.

EPA considered the rationale discussed in Unit XII.4. in developing this proposal. As discussed in the previous section, research shows the differences in the decision-making of adolescents and adults leads to the conclusion that noncertified applicators who are adolescents may take more risks than those who are adults. The use of RUPs presents demonstrable risks of significant harm to the applicator, the public, and the environment, and these risks are significantly influenced by the user's judgment and decision-making skills. Requiring noncertified applicators to be 18 years of age or older would prevent youth under 18 from being exposed while using RUPs under the supervision of a certified applicator

and would reduce risks to other persons and the environment from misapplication owing to users' poor judgment or decision-making skills. This proposal would also align with society's general trend toward increasing the ages at which persons are eligible to do certain things that present recognized risks, such as purchasing alcohol or becoming a licensed driver.

Because noncertified applicators use RUPs, their activities entail a heightened level of risk that requires maturity and good decision-making skills if unreasonable adverse effects are to be avoided. Therefore, it is reasonable to expect that establishing a minimum age of 18 for noncertified applicators would improve protections from misapplication of RUPs to applicators, the public, and the environment.

The regulatory text establishing a minimum age for noncertified applicators would be located at 40 CFR 171.201(b)(5).

5. *Costs.* EPA separated the cost for establishing a minimum age of 18 for noncertified applicators working under the direct supervision of commercial applicators and for those under the direct supervision of private applicators in this unit.

i. *Noncertified applicators working under the direct supervision of commercial applicators.* EPA estimates the cost of requiring noncertified applicators working under the direct supervision of commercial applicators to be 18 would be \$12.8 million per year (Ref. 3). The costs reflect the difference in the wage rates between these noncertified applicators who are 18 years or older and those who are younger.

ii. *Noncertified applicators working under the direct supervision of private applicators.* EPA estimates the cost of requiring noncertified applicators working under the direct supervision of private applicators to be 18 would be \$1.1 million per year (Ref. 3). The costs reflect the difference in the wage rates between these noncertified applicators who are 18 years or older and those who are younger.

For a complete discussion of the estimated costs of the proposals and alternatives, see the economic analysis for this proposal (Ref. 3).

EPA cannot quantify the benefits associated with this proposal (Ref. 3). However, it is reasonable to expect that this proposal would improve the health of adolescent noncertified applicators, as well as other bystanders and the environment. As discussed in Units XII and XIII., adolescents' judgment is not fully developed. It is reasonable to expect that restricting adolescents'

ability to handle pesticides would lead to less exposure potential for the noncertified applicators themselves, and less potential for misapplication that could cause negative impacts on other persons nearby, and the environment.

6. *Alternative options considered but not proposed.* EPA considered two alternatives: Proposing a minimum age of 16 for all noncertified applicators using RUPs under the direct supervision of commercial and private applicators, and proposing a minimum age of 18 for all noncertified applicators using RUPs under the direct supervision of a certified applicator with an exception for noncertified applicators working under the direct supervision of a private applicator on a farm owned by an immediate family member.

Establishing a minimum age of 16 for noncertified applicators would roughly align with the DOL's age restrictions related to pesticide handling. It would also correspond with the proposed minimum age of 16 for pesticide handlers under the WPS that EPA is considering. Finally, this alternative would give noncertified applicators the opportunity to gain knowledge and experience about the proper use of RUPs at a younger age while working under the direct supervision of a certified applicator. EPA recognizes similarities between noncertified applicators and handlers under the WPS. However, noncertified applicators use RUPs, products that pose a higher risk of harm to human health and the environment if not used properly. For this reason, it is critical that those who use RUPs, even with proper supervision, have developed the necessary maturity and decision-making skills to use the products in a manner that avoids unreasonable adverse effects to themselves, other persons, and the environment. EPA does not believe that harmonizing the minimum age for noncertified applicators with the proposed minimum age for handlers under the WPS and the Department of Labor's requirements would offer benefits sufficient to justify the increased potential risk from improper use of an RUP by a noncertified applicator who is not at least 18 years old.

The SBAR panel recommended that EPA consider a minimum age of 18 for commercial and private applicator certification, with an exception allowing private applicators working on a farm owned by an immediate family member (as defined at 40 CFR 170.2) to be certified at 16 years old (Ref. 34). EPA considered adopting a similar requirement for noncertified applicators or establishing a minimum age of 18 for

those working under the direct supervision of commercial applicators and 16 years old for those working under the direct supervision of private applicators. These options would allow flexibility for earlier certification on family-owned farms or for private applicators; however, they would provide a different level of protection to noncertified applicators working under the direct supervision of private and commercial applicators. A noncertified applicator is likely to have less experience and knowledge than a certified applicator. A person younger than 18 may also have less maturity and good judgement. It is reasonable to expect that it is more likely that there would be additional risk to the applicator, the public, and the environment from RUP applications by noncertified persons younger than 18, and despite the benefit of flexibility offered by a reduced minimum age on family owned enterprises, EPA does not consider that flexibility justified in light of the associated risks.

7. *Request for comment.* EPA specifically requests comment on the following questions:

- Are there alternatives that have not been considered that would improve protections for adolescent noncertified applicators using RUPs under the direct supervision of a certified applicator, either those under 16 or 18 years old, while allowing flexibility for pesticide use for agriculture?
- What would be the impact on State programs of establishing a minimum age of either 16 or 18 for noncertified applicators? What would be the impact on pesticide application businesses?
- Are there additional benefits or burdens with establishing a minimum age of 16 or 18 for noncertified applicators? If so, please provide data to support either position.
- Would this proposal have an impact on training programs for adolescents? If so, please describe the impact.
- Would it be possible for EPA to include in the final rule exceptions to the proposed minimum age requirement for persons participating in adolescent vocational training programs and high school educational programs, where persons who do not meet the minimum age work under the direct supervision of certified applicators, while ensuring that adolescents, others, and the environment are protected adequately? If so, explain how EPA could ensure adequate protections. Please suggest a framework for such an exemption.

XIV. Establish a National Certification Period and Standards for Recertification

A. National Recertification Period

1. *Overview.* To ensure certified applicators maintain core competencies and keep pace with the changing technology of pesticide application, and to ensure that the public, environment and applicators are protected from misapplication and misuse, EPA proposes to establish a maximum certification period of 3 years. This would require all applicators to renew their certification, *i.e.*, recertify, at least every 3 years.

2. *Existing regulation.* The current rule requires States to ensure applicators maintain a continuing level of competency and ability to apply pesticides safely and properly as part of their State plans. 40 CFR 171.8(a)(2). The rule requires that under plans administered by EPA, commercial applicators must be recertified every 3 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 3 years (Ref. 60). There are no corresponding regulatory requirements or policies establishing a maximum certification period under State and Tribal certification plans.

3. *Stakeholder information considered by EPA.* CTAG, SFIREG, State regulatory agencies and members of the PPDC workgroup all requested that EPA establish a standard maximum certification period. State and Tribal participants at the 2006 Worker Safety PREP generally supported the proposed 3-year maximum certification period, though States with 5-year periods expressed concerns for the potential impacts to their programs (Ref. 33).

States' requirements for frequency of applicator certification range from 1 year to 6 years. In a survey of State requirements, EPA determined that 31 States already have a certification period of 3 years or fewer for commercial applicators. Twenty-five States already require recertification every 3 years or fewer for private applicators (Ref. 5).

4. *Details of the proposal/rationale.* EPA proposes that all pesticide applicator certifications be valid for no more than 3 years. This proposal corresponds with the existing requirements for commercial applicators under EPA-administered plans and Federal agency plans.

Ensuring the ongoing competency of applicators of RUPs is crucial in

preventing unreasonable adverse effects when RUPs are used. Applicators must be knowledgeable about changing technology, product reformulations, new labeling and regulatory requirements, and other essential labeling information. Applicators also must be reminded about personal safety and basic application principles. To ensure ongoing competency, it is necessary to require renewal of an applicator's certification within a specific period. The more frequently applicators receive training, the more likely they are to retain the substance of the training and apply it on the job. Studies show that information retained from training sessions declines significantly within a year (Refs. 14 and 15). However, preparing for and demonstrating competency by passing an exam requires a higher level of preparation and a more reliable demonstration of the competencies needed. Therefore, it is reasonable to believe that allowing certified applicators to renew their certifications over a slightly longer period would not adversely impact human health and the environment. EPA already requires applicators under an EPA-administered plan to recertify every 3 years and it is reasonable to extend this requirement to all applicators certified under any plan approved by EPA.

It is reasonable to expect that requiring all applicators certified by States, Tribes and Federal agencies to be recertified at least every 3 years would set an acceptable minimum standard for continued competency in the applicator certification program.

The regulatory text for this proposal would be located at 40 CFR 171.107(a).

5. *Costs.* EPA estimated the cost of this proposal in conjunction with the proposal to establish requirements for recertification programs. See Unit XIV.B. The cost of this proposal is provided in combination with the cost of the proposal for recertification requirements in Unit XIV.B.5.

6. *Alternative options considered by EPA but not proposed.* EPA considered proposing a maximum certification period of 5 years for private and commercial applicators. As discussed in this unit, learned knowledge diminishes over time (Refs. 14 and 15). EPA must ensure that applicators maintain ongoing competency to protect themselves, other persons, and the environment from unreasonable adverse effects from RUP exposure. It is reasonable to expect that applicators retain less knowledge over a 5 year recertification period than they would over a 3 year recertification period, thereby increasing the potential risk

posed by applicators who do not maintain an ongoing level of competency. EPA estimates that the difference in cost between a 3 year and 5 year recertification would be negligible. For these reasons, it is reasonable to expect that the potential small cost savings associated with a 5 year recertification period instead of a 3 year recertification period are not significant enough to warrant the increased risks associated with applicators who do not maintain an ongoing level of competency in the use of RUPs.

7. *Request for comment.* EPA specifically requests comment on the following questions:

- Should EPA consider a different maximum recertification period? If so, what period and why?

B. Recertification Requirements

1. *Overview.* To ensure certified applicators maintain core competencies and keep pace with the changing technology of pesticide application, and to ensure that the public, environment and applicators are protected from misapplication and misuse, EPA proposes to require State, Tribal, and Federal agencies to require applicators to complete a continuing education program that meets or exceeds specific standards or to pass exams related to their certification(s) in order to be recertified.

2. *Existing regulation.* The current rule requires States to require applicators to demonstrate ongoing competency as part of their State plans. 40 CFR 171.8(a)(2). The rule has no requirements for the recertification standards such as content or manner in which ongoing competency is evaluated.

3. *Stakeholder information considered by EPA.* In a survey of State certification program personnel, CTAG found most States agreed that the credibility of training presenters, programs, and recertification exams should be subject to review and approval by the agency that assigns the recertification program credits or oversees exams. Participants at the 2006 Worker Safety PREP noted that most States offer applicators the option to take an exam for recertification if recertification is not accomplished through accruing continuing education units by the required deadline. Additionally, States noted that some applicator categories have so few applicators or the substance of the categories changes so infrequently that developing and updating training materials may be cost-prohibitive for States or cooperative extension services;

therefore, States requested the option to offer or require retesting for recertification (Ref. 33).

State and Tribal participants at the 2006 Worker Safety PREP generally supported having a requirement for the minimum number of credits that must be earned by an applicator in a continuing education program during the recertification period. Some States expressed concern that minimum requirements established at the Federal level could cause States with more stringent requirements to lower their requirements. For example, if EPA required an applicator to earn 6 credits per category every 3 years, those States with higher requirements (*e.g.*, 12 credits per category) might face resistance from their applicators. Conversely, they appreciated that a Federal standard would make issuing and monitoring reciprocal certificates to applicators less burdensome, because all States would meet a minimum standard for recertification programs.

4. *Details of the proposal/rationale.*

The Agency proposes to establish minimum standards for continuing education programs, including: The minimum number of continuing education units (CEUs) that must be earned by an applicator in order to be recertified in core and each category; the standard length of a CEU; and a requirement for applicators to earn at least half of the required CEUs in the 18 months preceding expiration of the applicator's certification. States, Tribes, and Federal agencies would be required to include a continuing education program that meets or exceeds these standards as part of their certification plan. EPA also proposes to allow States to require recertification only by exam. The exam and its administration would have to meet the standards outlined in Unit IX.

EPA proposes to require that private applicator continuing education programs require instruction in the general competency standards as well as each relevant application method-specific category. The more training applicators receive, the more likely they are to retain the substance of the training and apply it on the job. Under EPA's proposal, a private applicator would need to earn a minimum of 6 CEUs of instruction that covers the content proposed as 40 CFR 171.105(a) every 3 years to maintain core certification. The CEUs must be part of a continuing education program approved by the appropriate State, Tribal, or Federal agency for recertification. To qualify for recertification in the proposed application-method specific categories of soil fumigation, non-soil fumigation,

or aerial application, or in the predator control category, a private applicator would need to earn a minimum of an additional 3 CEUs specific to each relevant application method that covers the content proposed as 40 CFR 171.105(b) and (c) every 3 years. A commercial applicator would need to earn a minimum of 6 CEUs related to his or her core certification every 3 years to maintain his or her core certification. For each category (pest control and application method-specific) in which the applicator is certified, he or she would need to obtain at least 6 CEUs specific to each category every 3 years. For example, a commercial applicator certified in agricultural pest control and aerial application would be required to obtain 6 CEUs of core material to satisfy recertification requirements for commercial core, as well as an additional 6 CEUs in agricultural pest control and 6 CEUs in aerial application in order to satisfy recertification requirements for maintaining his or her overall certification in the appropriate categories.

EPA proposes to allow applicators to earn CEUs in a program administered by or approved by the certifying State, Tribal, or Federal agency. The certifying authority's certification plan would need to detail how it would review and approve content for the continuing education program and how it would ensure that applicators satisfy the necessary requirements. The certifying authority could either conduct the continuing education program directly (some States refer to this type of program as a workshop), or could approve continuing education programs administered by cooperative extension services at State universities, other States, or private training providers. To approve the program, the State would have to ensure that the continuing education program meets the competency requirements established for commercial core certification, general private applicator certification, or the specific category or application method-specific category covered by the continuing education program.

EPA also proposes to set 50 minutes of active training time as the standard for a CEU. There is a wide range of time across States and professions for what constitutes a CEU. A minimum standard of 50 minutes of education per CEU would be consistent with most State standards. Setting a minimum standard for acceptable CEUs across all States, Tribes, and Federal agencies will ensure a baseline level for recertification programs that employ training and may facilitate applicators earning credits for recertification in more than one State.

With a more standardized baseline for a CEU, States may be more likely to approve or accept continuing education programs presented in other States. Interstate collaboration for recertification would reduce the burden on State lead agencies and educators to develop and present new materials for each category. In addition, applicators certified in the same category in more than one State could be able to earn CEUs in one State and apply them to recertification in their other State of certification, reducing the overall burden associated with recertification in multiple States.

EPA also proposes to require that the applicator earn a minimum of one-half of the required CEUs during the 18 month period preceding the expiration date of his or her certification. A more recently trained applicator is more likely than less frequently trained applicators to apply what he or she learned from the training on the job. This should ensure that the applicator maintains an ongoing level of competence throughout the period that the certification is valid. The proposal would support applicators staying abreast of current information and technology related to their category of pesticide application.

EPA is also proposing to allow certifying authorities to require applicators to pass exams relevant to their categories of certification in order to be recertified. Exams are a reliable gauge of competency and can be used to ensure that applicators continue to demonstrate an appropriate level of competency.

For a discussion of the requirement for verification of the recertification candidate's identity, see Unit IX.

The regulatory text for the proposed addition of recertification standards would be located at 40 CFR 171.107(b).

5. *Costs.* The estimated costs for this proposal and the proposal in Unit XIV.A. are presented by impact to commercial applicators and private applicators. The costs to the States are incorporated in each section.

i. Commercial applicators. EPA estimates that the proposed requirement for commercial applicators to recertify would cost a total of \$6.5 million per year (Ref. 3). EPA estimated this cost based on an applicator being required to complete 6 hours of training in core competency standards and 6 hours of training for each category of certification. The recertification costs include applicators recertifying in the proposed application-method specific categories and the new predator control categories. EPA estimates that State costs to administer the proposed

recertification program for commercial applicators would be \$39,000 because most States already have recertification programs in place and would only need to adjust it to match the proposed regulatory requirement (Ref. 3).

ii. Private applicators. EPA estimates the cost of the proposed requirement for private applicators to recertify at \$16.8 million annually (Ref. 3). EPA estimated this cost based on an applicator being required to complete 6 hours of training in general private applicator competency standards and 3 hours of training for each application method-specific category of certification. The recertification costs include applicators recertifying in the proposed application-method specific categories and the new predator control categories. EPA estimates that State costs to administer the proposed recertification program for private applicators would be \$11,000 because most States already have a recertification program in place and would only need to adjust it to match the proposed regulatory requirement (Ref. 3).

6. Alternative options considered by EPA but not proposed. EPA considered a range of continuing education requirements but does not have a specific alternative proposal. EPA reviewed recertification and continuing education requirements for several other types of professional occupations and found wide variability in continuing education requirements across States or organizations within a single profession (e.g., nursing), and found little information to explain the variation in requirements. Similarly, EPA reviewed the existing State continuing education requirements for pesticide applicator recertification and found that the requirements ranged from two up to 40 continuing education units per cycle, and cycles ranged from 1 to 5 years, but there was little or no information available to support why a particular number of continuing education units was selected.

7. Request for comment. EPA specifically requests comment on the following questions:

- Is the proposed number of recertification CEUs too low or too high? If so, please provide specific information on the number of continuing education units that you believe should be required for professional recertification and the rationale behind the number.

- Is EPA's proposal to require that the applicator earn a minimum of one-half of the required CEUs during the 18 month period preceding the expiration date of his or her certification clear? Is there a way EPA could make the

requirement clearer or easier to understand? If so, please provide suggestions for how EPA could structure the requirement without altering the substance.

- Should EPA reconsider the proposal to require that the applicator earn a minimum of one-half of the required CEUs during the 18 month period preceding the expiration date of his or her certification? If so, why?

- Should EPA consider a different time period for applicator recertification? If so, please explain what period EPA should consider and why.

- Should EPA require commercial and private applicators to have the same recertification requirements for category recertification? If so, why?

- Should EPA do more to harmonize requirements for recertification to further facilitate reciprocity? Please describe what actions EPA should take and how they would further facilitate reciprocity.

XV. Revise State Certification Plan Requirements

1. Overview. 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 proposes 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 impact the requirements for Tribal and Federal agency plans.

2. Existing regulation. The current 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.

3. Details of the proposal/rationale. EPA proposes to revise the provisions covering the submission, approval, and maintenance of State plans. The revisions will cover: Revision of State plans to conform with proposed changes; additional reporting and accountability information; States' need to have both civil and criminal penalty authority to enforce their State plans; 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.

i. State plan modification to implement proposed changes. EPA's proposal would add appropriate provisions to ensure that State plans conform to new standards and requirements being proposed in other parts of the rule. This includes proposed standards for the certification of private and commercial applicators, recertification, and direct supervision of noncertified applicators. States would continue to be permitted to adopt, as they considered appropriate, the 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.

EPA considered several alternatives. First, EPA considered requiring States to adopt all applicable Federal categories proposed as 40 CFR 171.101 and 171.105. At the present time, few States have defined their certification categories to align exactly with the Federal categories—many have either split existing Federal categories into multiple categories or added a number of subcategories under categories similar to the Federal categories. Some stakeholders believe that requiring all certifying authorities to use the Federally-established categories could benefit applicator mobility, stating that if the standards for certification were consistent across States, States would be able to more easily evaluate requests for reciprocal certification. However, requiring States to adopt the Federal categories would burden States and applicators, and would not necessarily result in improved protection for applicators, the public, or the environment. Because the Federal categories may be broad, applicators may be required to learn material in areas not relevant to their actual applications, potentially reducing protections. Consequently, EPA expects that many States would still require applicators to certify in their State-specific subcategories to ensure specific competency. If a significant number of States continue to require applicators to certify in State-specific subcategories, it would defeat the goal of facilitating reciprocal certification. In this scenario, requiring States to adopt the Federal categories would increase the burden to the States to revise their certification systems to accommodate the changes, and to applicators required to pass

another exam, without any clear benefit in either efficiency or protection. Because there is little, if any, gain in protection from this option, and because it would be a burden to States and applicators, it is not proposed.

EPA also considered subdividing the national pest category 7 (industrial, institutional, structural and health-related pest control) into component parts. This category covers a range of specific application types—for example, applications in food handling areas to control insects and rodents, termite control in infested buildings, and treatments to nursing homes and schools. Safe and effective applications to these different sites require different skills and knowledge. Subdividing the category at the Federal level would allow the certification to focus on the competencies most relevant to applicators in the subdivided categories. However, 47 States have already created appropriate categories for their needs and their applicators learn information relevant to their specific applications and are being tested on that specific information. Because of the State-specific divisions, there is little consistency in how the States have subdivided the category. Retaining the category in its current form and allowing States to adjust it as needed would avoid imposing an increased burden on States to adjust their categories to a newly developed Federal standard with little or no improvement in protection.

For a discussion on EPA's proposal for applicator reciprocity, please refer to Unit XV.3.vii.

For standards for direct supervision of noncertified applicators, EPA proposes to require States to adopt the proposed standards at 40 CFR 171.201 for commercial and/or private applicators that supervise noncertified applicators. This would not require States to allow the use of RUPs by noncertified applicators under the direct supervision of certified applicators; States that choose to restrict use of RUPs to certified applicators would be exempted from the requirement to adopt the proposed standards as 40 CFR 171.201. These options would continue to allow the States the flexibility to decide whether or not to allow use of RUPs by noncertified applicators. EPA's criteria for approving the registrations of RUPs are based, in part, on presumptions that any uncertified applicators have at least the level of training mandated in 40 CFR 171.201. Therefore, EPA only proposes that States adopt EPA's standards for noncertified applicators exactly, with the flexibility to adopt additional

standards at the State's discretion to address State-specific issues.

The proposed regulatory text would be located at 40 CFR 171.303(a) and (b).

ii. Program reporting and accountability. To reflect the proposed changes to applicator certification categories and to ensure EPA receives adequate information to monitor the State's implementation of its certification plan, EPA proposes to require States to report the information below to EPA annually. EPA is also proposing to require Tribes and Federal agencies with their own certification plans to submit similar relevant information to EPA.

- 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 for 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 has established subcategories within any of the commercial categories, the report must 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.

EPA considers these additional reporting elements necessary to improve performance measurement and accountability for the applicator certification program. Standardized data reporting requirements assist in uniform program measurement, an important element of the 1993 Government Performance and Results Act (GPRA), Public Law 103-62, August 3, 1993, 107 Stat 285. The limited requirements for, and the wide variation in, the current State program reporting present impediments to national program monitoring and management. Fair and equitable assessment of State programs and the national program should be based on the review of standardized reports. Uniform data collection and submission would assist EPA in accurately measuring the success of the program and would facilitate the development and use of program measures to gauge program success. Areas requiring improvement and targeted outreach to address problems could be identified during data analysis.

The proposed regulatory language for the program reporting would be located at 40 CFR 171.303(c).

iii. Civil and criminal penalty authority. The current rule is not clear on whether States must have authority to impose both criminal and civil penalty provisions for commercial and private applicators. EPA has concerns that in the absence of either civil or criminal penalty provisions, a State would not have an adequate range of enforcement options and capabilities to respond appropriately to the wide range of pesticide misuse situations that could arise. EPA proposes to revise the regulation to expressly require that States have both civil and criminal penalty provisions.

The proposed regulatory language for civil and criminal penalty authority would be located at 40 CFR 171.303(b)(6)(iii).

iv. Commercial applicator recordkeeping. EPA proposes to clarify what records commercial applicators must maintain. The current rule mandates that State plans include requirements for certified commercial applicators maintain for at least two years routine operational records containing information on kinds,

amounts, uses, dates, and places of application of RUPs. 40 CFR 171.7(b)(1)(iii)(E). Under this proposal, commercial applicators would be required to keep and maintain all of the following records for the RUPs they apply:

- 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.

This proposed recordkeeping is 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. This proposal would ensure consistency between State recordkeeping requirements for commercial applicators and existing Federal recordkeeping requirements, which govern recordkeeping by commercial applicators certified under EPA-administered certification programs.

The proposed regulatory language for commercial applicator recordkeeping would be located at 40 CFR 171.303(b)(6)(vi).

v. RUP dealer recordkeeping. EPA proposes to require States 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 a RUP is distributed or sold by that dealership to any person. Records of each such transaction must 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.

All 50 States currently have RUP dealer recordkeeping requirements; EPA proposes this Federal standard to ensure consistency across the States and to ensure all necessary information is collected. This proposal would also ensure consistency between State recordkeeping requirements for RUP dealers and existing Federal recordkeeping requirements, which govern recordkeeping by RUP dealers that operate in areas covered by EPA-administered certification programs.

The proposed regulatory language for the proposed RUP dealer recordkeeping requirement would be located at 40 CFR 171.303(b)(6)(vii).

vi. Certified applicator credentials. The certification regulation does not currently have requirements for what information States must include on applicator certification documents. EPA proposes 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.

It is reasonable to expect that requiring consistent information on applicator certification across all certifying agencies would assist States in evaluating certification documents presented by applicators certified in another State, would assist dealers in reviewing certification information, and would assist enforcement agents in evaluating the applicator's certification document during an inspection.

The proposed regulatory text for applicator certification credentials would be located at 40 CFR 171.303(a)(6).

vii. Reciprocal applicator certification. The current provisions do not require States to provide specific information about State requirements and procedures for reciprocity. States have requested that EPA take action to establish standards to allow reciprocal certification between States and to standardize the process. Based on the request by States and to facilitate the certification of applicators working in more than one State, EPA proposes to require State certification plans to specify whether (and if so, under what circumstances) the State would certify applicators based, in whole or in part, on the applicator having been certified by another State, Tribe, or Federal agency. Under the proposed rule, such certifications would be subject to all of the following conditions:

- A State may only rely on current, valid certifications issued under an approved State, Tribal or Federal agency certification plan, and may only rely on a certification issued by a State, Tribe or Federal agency 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 will be accepted, the standards of competency in the State, Tribe or Federal agency that originally certified the applicator must be comparable to the standards of the accepting State.

- Any certification that is based, in whole or in part, on the applicator having been certified by another State, Tribe or Federal agency must terminate immediately if the applicator's original certification terminates for any reason.

- Any State which 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 to ensure the State will immediately terminate an applicator's certification if the applicator's original certification terminates for any reason.

• The State 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 this section.

The proposed regulatory text related to States issuing certifications based on applicator certification credentials obtained in other jurisdictions would be located at 40 CFR 171.303(a)(7).

viii. State plan maintenance, modification, and withdrawal. EPA proposes to replace the existing provisions related to maintenance, modification, and withdrawals of State certification plans. The proposed revisions would clarify the types of plan changes that constitute substantial modifications and therefore require additional review and approval by EPA. The proposed revisions would codify existing interim program policy and guidance issued by EPA in 2006 (Ref. 52).

The regulatory text for modification and withdrawal of State plans will be located at 40 CFR 171.309.

4. *Costs.* EPA estimates the proposed revisions to the State certification plan requirements will include 3 costs: Revising State requirements to meet EPA's proposed standards, updating State plans for submission to and approval by EPA, and adding a requirement for dealers to maintain records of RUP sales (Ref. 3). The current rule requires States to require commercial applicators to keep records; the proposal merely clarifies the content of the records and therefore is not expected to result in costs to the applicator or States.

EPA estimates that States would incur a one-time cost of about \$119,000 annually for the first two years to revise and finalize pesticide applicator laws and regulations that meet or exceed EPA's proposed requirement (Ref. 3). Once States have revised their laws and regulations, they will need to draft and submit a revised plan for applicator certification to EPA for approval. Since EPA already requires States to update plans as appropriate and to report necessary information to EPA annually, EPA estimates the cost of this process would be about \$4,000 annually for the first two years after implementation across all States (Ref. 3).

Finally, it is reasonable to expect that the requirement for RUP dealers to maintain records of RUP sales will not impose any burden on the regulated community. All States already require RUP applicators to maintain such records. However, a few States may have to do additional revisions to their

laws and regulations to ensure the State recordkeeping requirement mirrors the proposed Federal requirement. There is no estimated cost associated with this proposal because all States already require RUP dealers to maintain records of sales (Ref. 3).

5. *Alternative options considered by EPA but not proposed.* EPA considered requiring States to make available publically a list of all applicators certified by the State. Under this alternative, such a list could be made available electronically, e.g., via the internet. Such a list could be used by the public to verify whether the pest control operator hired to perform the application was certified. States already maintain information on the persons who hold valid certifications. States maintain the information in varying formats—some keep paper files, while others maintain an electronic database that is updated in real time as certifications are earned and expired. Some States have chosen to publish the information on the internet. Some States may have restrictions on publishing information online, but would make it available upon request. Because the States do not have a uniform manner to track and make available electronically the names of all certified applicators, and the public may already have access to this information in varying forms in each State, it is not necessary impose a requirement at the Federal level.

6. *Request for comment.* EPA specifically requests comment on the following questions:

• EPA is not proposing to require States to adopt all applicable Federal categories to address reciprocity between jurisdictions, because it would burden States and applicators, and protections may not be improved. Are there approaches to facilitate reciprocity that would minimize burdens and disruption at the lead agency level and improve protections? Please describe these approaches and how they may be implemented.

• Should EPA require all States, Tribes, and Federal agencies to adopt the same certification standards and to mandate reciprocity between jurisdictions? Please describe benefits and drawbacks to such a requirement.

• Are there benefits, that EPA has not considered, to requiring States to adopt Federal certification categories? If so, please explain the benefits and how they would impact competency standards for national certification categories.

• Would the proposed reporting and recordkeeping requirements impose unnecessary burden on States, farmers, small businesses, or other entities? If so,

who would bear unnecessary burden and why?

• Should EPA consider requiring records to be retained for a different period? If so, what how long should records be retained and why?

• Are there other types of information that EPA should consider collecting from States, RUP dealers, or commercial applicators?

• Is there any other information related to reciprocal certification that EPA should consider incorporating into the regulation? If so, please indicate which information should be added or deleted and why.

• Should EPA consider adding to or deleting from the required elements of the applicator certification document? If so, please indicate which information should be added or deleted and why.

• Should EPA consider requiring States to make available publically a list of all applicators holding a valid certification? If so, should the list be available electronically? Should the list be updated in real time, or would periodic updates be acceptable? If periodic updates are chosen, what period would be reasonable?

• Should EPA consider requiring certifying authorities to require their commercial applicators to report incidents that would meet the reporting criteria of 40 CFR 159.184 if known to the pesticide registrant?

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

1. *Overview.* In order to codify Agency policy on Federal agency certification plans, EPA proposes to delete from the current regulation the section on GAP (40 CFR 171.9) and to codify EPA's 1977 policy on review and approval of Federal agency plans.

2. *Existing regulation.* The certification rule covers GAP certifications, outlining a process for certifying employees of Federal agencies to use RUPs in the course of their duties under a government-wide GAP. 40 CFR 171.9. The 1974 proposal (Ref. 61) included a special process for certifying employees of Federal agencies, but the process was not included in the final rule. EPA subsequently outlined a proposed process for certifying employees of Federal agencies under a government-wide GAP (Ref. 62). The GAP certification process was included in the final revised rule (Ref. 24), but a GAP was never developed or implemented by EPA or the Federal government. In 1977, EPA announced a policy that provided an alternative approach for Federal employee certification (Ref. 60). Under the 1977 policy, EPA allows Federal agencies to

submit their own plans for the certification of RUP applicators; EPA approves the Federal plans provided they meet or exceed EPA's standards. 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. Four Federal agencies currently have EPA-approved Federal agency plans. The Department of Defense (DOD) and USDA have certification plans that were revised and approved in 2009. The Departments of Energy (DOE) and the Interior (DOI) have plans that were approved prior to 1990.

3. *Details of the proposal/rationale.* EPA proposes to delete the current text at 40 CFR 171.9. EPA proposes to codify the 1977 policy covering Federal agency plans (Ref. 60), and to clarify the standards that Federal agencies must meet. The proposed revisions include the following requirements: Federal agencies must comply with all applicable standards for certification, recordkeeping, and other similar requirements for State/Tribal plans; Federal agencies must 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; Federal agencies must comply with all applicable Executive Orders; and Federal agencies must conform to standards established for States related to maintenance of plans and annual reporting.

The proposed regulatory language concerning Federal agency plans will be located at 40 CFR 171.305.

4. *Costs.* EPA estimates negligible burden associated with this requirement (Ref. 3). Although Federal agencies with existing plans would be required to revise and resubmit their certification plans to be in compliance with the revised proposed rule resulting in some administrative burden for these Federal agencies, EPA believes that the administrative burden associated with plan revisions would not be significant for two reasons. First, the four Federal agencies currently administering certification plans appear to be the only Federal agencies interested in certifying applicators and so this proposal will not have a substantial impact on most Federal agencies. Second, Federal agencies with existing certification plans have revised their plans to address changing needs within their certification programs, so revisions required by this proposal would not significantly increase the burden above that which they already incur.

5. *Request for comment.* EPA specifically requests comment on the following questions:

- Is there any reason for EPA to retain the GAP provisions in the current rule? If so, why?

XVII. Clarify Options for Establishing a Certification Program in Indian Country

1. *Overview.* In order to provide more workable applicator certification options in Indian country, EPA proposes to revise the mechanisms available to Tribes for certifying pesticide applicators.

2. *Existing regulation.* The current rule provides three options for applicator certification programs in Indian country: Tribes may utilize State certification to certify applicators (requires concurrence by the State(s) and an appropriate State-Tribal cooperative agreement); Tribes may develop and implement a Tribal certification plan (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. 1).

Currently, only a few Tribes have been approved by EPA to administer certification plans. In those areas of Indian country without an EPA-approved State or Tribal certification plan in effect, EPA administers a certification plan to ensure that RUPs are used only by certified applicators or noncertified applicators working under their direct supervision.

3. *Stakeholder information considered by EPA.* Consistent with EPA's Indian Policy and Tribal Consultation Policy, EPA engaged in a formal consultation process with Tribes summarized in Unit XXII. (Ref. 63).

4. *Details of the proposal/rationale.* EPA proposes to revise the mechanisms for establishing applicator certification programs in Indian country. EPA would revise the option where a Tribe relies on State certification and the option for EPA-administered certification plans in Indian country. EPA would also amend the requirements for Tribal-implemented certification plans to require Tribal plans to incorporate the proposed revisions to applicator certification standards.

First, the proposal would revise the current option for Tribes to rely on State certification by eliminating the requirement for Tribes to enter into cooperative agreements with States. This option would be replaced by an option to enter into agreements with EPA Regional offices to establish

certification programs in Indian country. The proposed revisions would allow Tribes to enter into agreements with EPA to recognize the certification of applicators who hold a certificate issued under one or more specific EPA-approved State, Tribal or Federal agency certification plans, without the need for State-Tribal cooperative agreements and with little burden on States or Tribes. EPA would retain relevant enforcement responsibilities in areas of Indian country covered by a certification plan implemented in this manner.

Second, EPA proposes to clarify that EPA can include multiple Tribes and/or multiple geographic areas of Indian country under one single EPA-administered plan. This option facilitates the implementation of a nation-wide certification plan that would cover applicators using RUPs in different, non-contiguous parts of Indian country. This proposal is merely a clarification of the existing rule, and EPA has already established a national plan for certification of applicators in Indian country. EPA implemented its national plan for Indian country in 2014 (Ref. 1). The EPA-administered plan serves those areas of Indian country throughout the United States where no other EPA-approved certification mechanism exists.

Third, the proposal would update the requirements for Tribal plans by requiring those Tribes that choose to manage their own certification plan to adopt the new standards being proposed for State and Federal agency certification plans in regard to 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. The proposal would also eliminate current requirements for States to include in their State certification plans references to any agreements with Tribes for recognizing the States' certificates.

The proposed revisions would ensure that Tribes are generally subject to the same certification program standards applicable to States, Federal agencies, and EPA-administered programs. However, certain separate requirements would be included in the Indian country provision relating to the exercise of criminal enforcement authority. EPA recognizes that certain limitations exist regarding Tribes' ability to exercise criminal enforcement authority. In such circumstances, it is appropriate to retain primary criminal enforcement authority with the Federal government and EPA has proposed requirements for Tribes and EPA to

enter into relevant agreements regarding the exchange of potential investigative leads. These requirements are similar to EPA's approach to criminal enforcement authority in the context of other EPA rules addressing Tribal programs under Federal environmental laws. See, e.g., 40 CFR 49.8. The proposed revisions would enhance the ability of Tribal programs to develop and implement certification plans and programs for those Tribes that choose to manage their own certification plans, and would provide practicable alternatives for those Tribes that do not. The proposed revisions may require some Tribes with a current, EPA-approved certification plan to make changes to Tribal laws, regulations, or code. EPA intends to consider the potential impacts of Tribal legislative changes and Tribal plan revision when establishing effective dates for the final rule.

The regulatory language for the proposed options for applicator certification in Indian country would be located at 40 CFR 171.307.

5. *Costs.* The costs associated with these changes should be negligible because they primarily result in clarification of requirements and policy, not in the imposition of substantial new requirements or obligations on the part of Tribes (Ref. 3). EPA does not believe the proposed revisions would place any unreasonable burden on Tribes because they do not require Tribes to implement certification programs. These proposed revisions would require 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. Because there are currently only four Tribes with an EPA-approved certification plan the proposed changes to certification mechanisms in Indian country should not result in a significant impact on Tribal entities or programs as a whole.

6. *Request for comment.* EPA specifically requests comment on the following questions:

- Are there other mechanisms EPA should consider for certification of RUP applicators in Indian country? If so, please describe the additional mechanism(s), how they would be implemented, and the benefit to Tribes, applicators, human health, and the environment.

XVIII. Revise Provisions for EPA-Administered Plans

1. *Overview.* To update requirements for EPA-administered plans to conform with the proposed changes to the

regulation, EPA proposes to amend the section of the rule dealing with EPA-administered plans.

2. *Existing regulation.* The current rule establishes requirements for EPA-administered certification in States or areas of Indian country without EPA-approved certification plans in place, including specific standards for certification and recertification of pesticide applicators. 40 CFR 171.11.

3. *Details of the proposal/rationale.* EPA proposes to revise the current section outlining the requirements for an EPA-administered Federal certification plan to incorporate the proposed changes to State certification plans related to RUP applicator certification, recertification, and noncertified applicator qualifications, as well as plan reporting and maintenance requirements. The rules governing EPA-administered certification programs should be constructed in a way that minimizes administrative burden on EPA and the regulated community and reduces costs to taxpayers, while still providing EPA with the tools necessary to protect human health and the environment. The proposed revisions would make requirements for the certification and recertification of RUP applicators and supervision of noncertified applicators parallel to the requirements proposed for States, Tribes, and other Federal agencies.

The proposed regulatory language covering EPA-administered plans would be located at 40 CFR 171.311.

4. *Costs.* EPA estimates the costs associated with this proposal would be negligible (Ref. 3). EPA currently administers two certification plans—one for the Navajo Tribe (Ref. 2) and one for certification in Indian country (Ref. 1). It is reasonable to expect that the costs of updating these plans to conform to the proposed changes would be relatively low.

5. *Request for comment.* EPA specifically requests comment on the following questions:

- Should EPA consider other revisions to the provisions for EPA-administered plans? If so, please describe the additional revision(s), how they would be implemented, and the benefit(s) to applicators, human health, and the environment.

XIX. Revise Definitions and Restructure 40 CFR Part 171

A. Improved Definitions

EPA proposes to revise the definitions in the certification regulation to add several new definitions and to eliminate several unnecessary definitions. EPA expects that improved definitions

would reduce the likelihood of misinterpretation and thereby improve compliance and enforceability.

These proposed revisions to the definitions adopt more widely used and commonly accepted "plain English" language, and add clarity and consistency to the rule. The proposed revisions to the definitions also help address issues raised by State regulatory partners and other program stakeholders. EPA does not believe the proposed revisions to the definitions will add new regulatory requirements on the regulated community or substantially increase regulatory burden.

The revised and new definitions would be located at 40 CFR 171.3.

1. *Revised definitions.* The Agency proposes to revise the following existing definitions: "compatibility", "dealership", "non-target organism", "ornamental", "principal place of business", and "toxicity".

2. *New definitions.* The Agency also proposes to add the following new definitions: "application", "application method", "fumigant", "fumigation", "Indian country", "Indian Tribe", "noncertified applicator", "personal protective equipment", "use", and "use-specific instructions".

3. *Definitions to be deleted.* The Agency proposes to delete the following existing definitions from 40 CFR part 171 because they are no longer necessary as a result of other proposed revisions to the existing rule or are already defined in FIFRA: "Act", "Agency", "forest", "uncertified person", and "hazard".

4. *Request for comment.* EPA specifically requests comment on the following questions:

- Are there other terms that EPA should consider adding, clarifying, redefining, or eliminating from the rule? If so, please provide detail about the term(s) and rationale for change.

B. Restructuring of 40 CFR Part 171

In order to improve clarity and implement the principles of using plain language in regulations, EPA proposes to reorganize the structure of 40 CFR part 171. EPA expects the revised 40 CFR part 171 will be easier to read and understand, improving compliance by applicators and other program stakeholders.

1. *Existing 40 CFR part 171.* At this time 40 CFR part 171 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, requirements for persons working under the direct supervision of a certified applicator, definitions, and a

statement of purpose. The second half of the rule (40 CFR 171.7 through 171.11) describes the procedures for States, Tribes, Federal agencies, and EPA to administer a certification program. The rule has a section titled "Government Agency Plan" describing a plan covering the entire Federal government that was not implemented. EPA has received feedback that this section is difficult to understand and seems irrelevant.

2. *This proposal.* The proposal would reorganize the rule into four subparts: "General Provisions", "Certification Requirements for Applicators of Restricted Use Pesticides", "Supervision of Noncertified Applicators", and "Certification Plans". The General Provisions section would include the sections on scope, definitions, and effective date. The Certification Requirements for Applicators of Restricted Use Pesticides section would include all standards for the certification and recertification of commercial and private applicators. The Supervision of Noncertified Applicators section would include all relevant standards for the certified applicator and the noncertified applicator using RUPs under his or her direct supervision. The Certification Plans section would include 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.

EPA expects that the restructured rule will facilitate understanding of the rule by applicators and authorized agencies because it deletes obsolete provisions and uses clearer language.

3. *Alternative options considered by EPA but not proposed.* EPA considered two additional changes to the organization of the regulation. First, EPA considered moving the paragraph titled "Determination of Competency" proposed as 40 CFR 171.103(a) to the beginning of subpart B as an independent, introductory section. Second, EPA considered moving the paragraph titled "Examination Standards" proposed as 40 CFR 171.103(b) to subpart D related to certification plans. Keeping the standards related to determining competency and administering competency exams in the same section as the specific competency standards that applicators must meet is a more reasonable organization of the regulation because these two sections are related to how commercial applicator competency is determined. Therefore, EPA does not propose the two changes discussed in this unit.

4. *Request for comment.* EPA specifically requests comment on the following questions:

- Is the restructuring clearer? Is it easier to read and understand?
- Are there other ways that EPA could simplify or clarify 40 CFR part 171? If so, please describe.
- Should EPA consider alternate organizations of the regulation? If so, please provide a proposal and rationale for reorganization.

XX. Implementation

EPA proposes to make the final rule effective 60 days after the promulgated rule is published in the **Federal Register**. Compliance with certain provisions of the rule would be delayed. Existing certification plans could remain in effect for up to four years after the effective date of the final rule. Beginning four years after the effective date of the final rule, a State, Tribe, Federal agency, and EPA would only be permitted to certify applicators of RUPs in accordance with a certification plan that meets or exceeds all of the applicable requirements of the final regulation and that has been approved by EPA after the effective date of the rule.

States, Tribes, and Federal agencies administering EPA-approved certification plans would be required to submit amended certification plans to EPA for approval within two years of the effective date of the final rule. EPA intends to review and respond to all certification plans submitted within 2 years of the effective date. This would allow ample time for EPA, Tribes, Federal agencies, and State regulators time to make the necessary changes to certification plans, and for these and other stakeholders to implement the new certification procedures. EPA expects that applicators may need to be certified in new categories and noncertified applicators could need training to meet the new standard. States, Tribes, and Federal agencies administering EPA-approved certification plans would need to become familiar with the new regulation and conduct outreach to the regulated community. Certified applicators and trainers of noncertified applicators would have to become familiar with the noncertified applicator training content, ensure that they meet any eligibility requirements, and obtain training materials if necessary. As resources permit and if the final rule includes the relevant provisions from the proposal, EPA intends to develop training materials for noncertified applicators working under the direct supervision of a certified applicator and for

certification in a non-soil fumigation category. Materials currently exist that can be modified to support general certification for private applicators, and EPA has developed and distributed to States training materials for aerial applicators and soil fumigation categories.

To facilitate implementation, EPA plans to issue a guidance document at the time the final rule is published, to provide assistance to States, and to conduct outreach to potentially affected parties.

EPA requests comment on the proposed implementation of the rule. Specifically, EPA requests feedback on the following:

- Would States and Tribes be able to amend and submit revised certification plans for EPA approval within 2 years of the effective date of the final rule?
- If the proposed implementation schedule does not seem reasonable, please provide specific comments on why the proposal is not reasonable and provide specific suggestions of an alternate schedule and why it would be reasonable.
- Would States, Tribes, and Federal agencies need additional time after EPA approves the revised certification plan that meets or exceeds the requirements of the final rule in order to bring certified applicators into compliance with the new requirements? If so, how much time would be needed? What activities would be conducted?
- Would the implementation schedule be reasonable if EPA provided exams and training materials for the proposed additional categories?
- What support would States, Tribes, and Federal agencies require from EPA during the implementation of the provisions of the final rule?
- If EPA evaluates the effectiveness and/or the impacts and benefits of the rule, what timeframe should be used to conduct the evaluation, *e.g.*, should EPA begin a review after the rule is fully implemented or a specific time period after full implementation? For how long should EPA conduct the evaluation? Please provide additional information on methodology that could be used to conduct any evaluation.

XXI. References

The following is a listing of the documents that are specifically referenced in this rulemaking. The docket includes these documents and other information considered by EPA. For assistance in locating these other documents, please consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

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2. 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).
3. EPA. Economic Analysis of Proposed Revisions to the Applicator Certification Regulation. July 29, 2015.
4. EPA. Pesticides; Agricultural Worker Protection Standard Revision. Proposed Rule. **Federal Register** (79 FR 15444, March 19, 2014) (FRL-9395-8).
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19. EPA. Office of the Inspector General. Result of Assessment of Controls Over Emergency Removal Actions at Methyl Parathion Sites. Report No. E1SFB7-06-0020-7400069. September 23, 1997.
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24. 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).
25. 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).
26. EPA. Certification of Pesticide Applicators; Expansion of Recertification Time Period. Final Rule. **Federal Register** (48 FR 29854, June 29, 1983) (FRL-2338-8).
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62. EPA. Pesticide Programs; Submission and Approval of State Plans for Certification of Commercial and Private Applicators. Proposed Rule. **Federal Register** (40 FR 2528; January 13, 1975) (FRL–320–4).

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XXII. FIFRA Review Requirements

Under FIFRA section 25(a), EPA has submitted a draft of the proposed rule to the Secretary of the Department of Agriculture, the FIFRA Scientific Advisory Panel (SAP), and the appropriate Congressional Committees. USDA provided comments on this proposed rule, copies of which, along with EPA's responses, are located in the docket for this rulemaking. The SAP waived its review of this proposal on September 4, 2014.

XXIII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review; and, Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action because it may raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in Executive Order 12866 (58 FR 51735, October 4, 1993). Accordingly, EPA submitted the action to the Office of Management and Budget (OMB) for review under Executive Order 12866 and Executive Order 13563 (76 FR 3821, January 21, 2011), and any changes made in response to OMB recommendations have been documented in the docket. 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 III.B. (Ref. 3).

B. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document that the EPA prepared has been assigned EPA ICR number 2499.01 (OMB Control No. 2070–NEW). You can find a copy of the ICR in the docket for this proposed rule, and it is briefly summarized here (Ref. 64).

The information collection activities related to the existing certification regulation 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 2499.01 (OMB Control No. 2070–NEW) only addresses the proposed changes to the certification regulation. These include:

- Updating the information States, Tribes, and Federal agencies report to EPA.
- Updating the process and requirements for modifying a certification plan.
- Adding a provision for States to require recordkeeping by RUP dealers.
- Adding specific requirements for noncertified applicator qualification through training.
- Adding a provision for commercial applicators to maintain records of noncertified applicator training.

1. *Respondents/affected entities. i. Certified applicators; private and commercial.* The number of applicators is based on the Certification Plan and Reporting Database for the years 2008 to 2013 (CPARD, 2014), there are 364,579 commercial applicators and 455,278 private applicators.

ii. *Noncertified applicators under the direct supervision of certified applicators.* It is estimated that there are 947,275 noncertified applicators who apply RUPs under the direct supervision of commercial certified applicators, and there are 81,678 noncertified applicators under the direct supervision of private certified applicators.

iii. *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 RUPs are generally not labeled for use in residential and other

public areas, even by a certified applicator.

iv. *Authorized agencies.* Authorized agencies are the entities that are federally authorized 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. In addition to the 50 States, there are 4 plans for the US territories (Puerto Rico, DC, US Virgin Islands, and Pacific Islands), 4 Tribal plans, and 5 approved Federal agency certification plans. Federal agencies include DOD, DOE, USDA APHISPPQ, USDA Forest Service (the 2 USDA plans are separate plans), and DOI (the DOI plan covers 3 agencies within DOI BLM, BIA and NPS, but no others). Wage rates vary according to the entity.

2. *Respondent's obligation to respond.* Mandatory (7 U.S.C. 136–136y, particularly sections 136a(d), 136i, and 136w).

3. *Estimated number of respondents.* 1,749,265.

4. *Frequency of response.* Rule familiarization will 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 training of noncertified applicators working under the direct supervision of commercial applicators will occur annually. Recordkeeping of RUP sales will occur each time an RUP is sold, which EPA estimates will be 39 times per year.

5. *Total estimated burden.* 1,853,000 hours (per year). Burden is defined at 5 CFR 1320.3(b).

6. *Total estimated cost.* \$57,363,250 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, and on applicable collect instruments.

Submit your comments on EPA's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to oir_submissions@omb.eop.gov, Attention: Desk Officer for the EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must

receive comments no later than September 23, 2015. The EPA will respond to any ICR-related comments in the final rule.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under RFA, 5 U.S.C. 601 *et seq.* The small entities subject to the requirements of this action are private applicators, commercial applicators, and noncertified applicators using RUPs under their direct supervision. The Agency has determined that for private applicators, average impacts of the rule represent 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. Impacts to the smallest farms, especially in high-impact States, could exceed 2% of annual sales revenue but the number of farms facing such impacts is small relative to the number of small farms affected by the rule. For commercial applicators, average impacts of the rule represent less than 0.1% of annual revenue for the average small firm. The impacts are expected to be around 0.1% of annual revenue even for the high cost scenarios. Details of this analysis are presented in the Economic Analysis for this action (Ref. 3).

Although EPA is not required by the RFA to convene a Small Business Advocacy Review (SBAR) Panel because this proposal would not have a significant economic impact on a substantial number of small entities, EPA has nevertheless 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 is included in the docket for this rulemaking (Ref. 34).

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. The proposed rule requirements would primarily affect certified applicators of RUPs. The total estimated annualized cost of the proposed rule is \$47.2 million (Ref. 3).

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. However, this action may be of significant interest to State governments. Consistent with the EPA's policy to promote communications between the EPA and State and local governments, EPA consulted with State officials early in the process of developing this rulemaking to permit them to have meaningful and timely input into its development. EPA worked extensively with State partners when considering revisions to the existing regulation and solicited feedback from States in a number of ways, as discussed in Unit III. EPA carefully considered the input of State partners during the development of this rulemaking in meetings with State pesticide regulatory officials and with groups representing State pesticide regulatory agencies. In the spirit of Executive Order 13132, EPA specifically solicits comment on this rulemaking from State and local officials.

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 would require 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. 1) and has implemented a specific certification plan for the Navajo Nation (Ref. 2). As proposed, 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 proposed revisions would place any unreasonable burden on Tribes because the proposed rule does not require Tribes to implement certification programs. There are currently only four Tribes with an EPA-approved certification plan. The proposed rule would require existing Tribal certification plans to be revised and resubmitted to EPA for review and approval. The costs associated with the proposed changes should be negligible because they primarily result in clarification of requirements and policy, not the imposition of substantial new obligations on the part of Tribes. 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. 63).

EPA specifically solicits additional comment on this proposed action from Tribal officials.

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

This proposed rule 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. However, it is reasonable to expect that the environmental health or safety risks addressed in this proposed rule may 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 proposed 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 proposal 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 proposed rule seeks to regulate the ages at which children can apply pesticides. The proposed rule would establish 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. Since many RUPs present heightened risks to harm human health relative to other pesticides, EPA feels that they warrant special consideration. EPA expects that the proposals to establish minimum ages would mitigate or eliminate many risks faced by young applicators.

Additional 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. 3).

The public is invited to submit comments or identify peer-reviewed studies and data that assess effects of early life exposure to pesticides.

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

This proposed 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. Further, this rule is not likely to have any adverse energy effects because it does not require any action related to 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

EPA believes that this proposed rule would not have disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994), because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

EPA engaged with stakeholders from impacted communities extensively in the development of this rulemaking in order to seek meaningful involvement of all parties. The Agency's efforts to address environmental justice through this rulemaking were reviewed repeatedly during the development of the rule and its supporting documents. The proposed changes demonstrate EPA's commitment to improving the health and safety of certified applicators and noncertified applicators using RUPs under their direct supervision by changes such as adding application method-specific categories, strengthening competency standards for private applicators, adding training for

noncertified applicators using RUPs under the direct supervision of a certified applicator, and establishing a minimum age for all persons using RUPs.

List of Subjects in 40 CFR Part 171

Environmental protection, Administrative practice and procedure, Certified applicator, Commercial applicator, Indian Country, Indian Tribes, Noncertified applicator, Pesticides and pests, Private applicator, Restricted use pesticides, Reporting and recordkeeping requirements.

Dated: August 5, 2015.

Gina McCarthy,
Administrator.

For the reasons discussed in the preamble, the EPA proposes to revise 40 CFR part 171 as follows:

PART 171—CERTIFICATION OF PESTICIDE APPLICATORS

Subpart A—General Provisions

Sec.

- 171.1 Scope.
- 171.3 Definitions.
- 171.5 Effective date.

Subpart B—Certification Requirements for Applicators of Restricted Use Pesticides

- 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.

Subpart C—Supervision of Noncertified Applicators

- 171.201 Requirements for direct supervision of noncertified applicators by certified applicators.

Subpart D—Certification Plans

- 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 certification plans.
- 171.311 EPA-administered applicator certification programs.

Authority: 7 U.S.C. 136i and 136w.

Subpart A—General Provisions

§ 171.1 Scope.

(a) This part establishes Federal standards for the certification and recertification of applicators of restricted use pesticides. 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, requirements for noncertified persons using restricted use pesticides under the direct supervision of a certified applicator, and requirements for pesticide applicator certification plans administered by States, Tribes and Federal agencies.

(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.

§ 171.3 Definitions.

Terms used in this part have the same meanings they have in FIFRA and 40 CFR part 152. In addition, the following terms, when used in this part, shall mean:

Agricultural commodity means any plant, or part thereof, or 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.

Application means the dispersal of a pesticide on, in, at, or around a target site.

Application method means the application of a pesticide using a particular type of equipment, mechanism, or device, including, but not limited to, ground boom, air-blast sprayer, wand, and backpack sprayer, as well as methods such as aerial, chemigation, and fumigation.

Application method-specific certification category means a defined set of competencies related to the use of a specific application method to apply restricted use pesticides.

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 dispersed by the equipment.

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.

Competent 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 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.

Fumigation means the application of a fumigant.

Host means any plant or animal on or in which another species of plant or animal lives for nourishment, development, or protection.

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 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.

Non-target organism means any plant, animal or other organism other than the target pests which 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 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, but not limited to, 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 application 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 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.

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 FIFRA section 3(d).

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 related derivative compounds are able to cause an adverse physiological effect on an organism as a result of exposure.

Use, as in "to use a pesticide" means any of the following:

(1) Pre-application activities, including, but not limited to:

(i) Arranging for the application of the pesticide.

(ii) Mixing and loading the pesticide.

(iii) Making necessary preparations for the application of the pesticide, including, but not limited to, responsibilities related to providing training, a copy of a label and use-specific instructions to noncertified applicators, and complying with any applicable requirements under 40 CFR part 170.

(2) Applying the pesticide, including, but not limited to, supervising the use of a pesticide by a noncertified applicator.

(3) Post-application 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 materials contaminated with or containing pesticides.

Use-specific instructions means 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.

§ 171.5 Effective date.

This part is effective [60 days after the date of publication of the final rule in the **Federal Register**]. Certification plans approved by EPA before the effective date remain approved except as provided in §§ 171.301(b) and 171.309.

Subpart B—Certification Requirements for Applicators of Restricted Use Pesticides

§ 171.101 Commercial applicator certification categories.

(a) *Pest control certification categories.* Certification in any of the pest control certification categories listed in this paragraph (a) alone is not sufficient to lawfully use or supervise the use of products intended to be applied using a method specified in paragraph (b) of this section.

(1) *Agricultural pest control*—(i) *Crop pest control*. This category applies to commercial applicators who use or supervise the use of restricted use pesticides in production of agricultural crops, including but not limited to grains, vegetables, small fruits, tree fruits, peanuts, tree nuts, tobacco, cotton, feed and forage crops including, but not limited to, grasslands, and non-crop agricultural lands.

(ii) *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 paragraph (a)(10) of this section.

(2) *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.

(3) *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.

(4) *Seed treatment*. This category applies to commercial applicators using or supervising the use of restricted use pesticides on seeds in seed treatment facilities.

(5) *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 (b)(8) of this section.

(6) *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, power-line, pipeline, and railway rights-of-way, and similar areas.

(7) *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, but not limited to, manufacturing facilities, warehouses, grain elevators, and any other structures and adjacent areas, public or private, for the protection of

stored, processed, or manufactured products.

(8) *Public health pest control*. This category applies to State, Tribal, Federal or other governmental employees who use or supervise the use of restricted use pesticides in public health programs for the management and control of pests having medical and public health importance. This category includes contractors as well as individuals directly employed by a State, Tribal, Federal, or other government agency for government-sponsored public health programs.

(9) *Regulatory pest control*. This category applies to State, Tribal, Federal, or other governmental employees who use or supervise the use of restricted use pesticides in the control of regulated pests but does not include individuals that use or supervise the use of sodium cyanide in mechanical ejection devices or sodium fluoroacetate in a protective collar for predator pest control. This regulatory pest control category includes contractors and other individuals directly employed by a State, Tribal, Federal, or other government agency for government-sponsored regulatory pest control programs. Certification in this category does not authorize the purchase, use, or supervision of use of products for predator control listed in paragraph (a)(10) of this section.

(10) *Predator pest control*—(i) *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.

(ii) *Sodium fluoroacetate*. 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.

(11) *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 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, Tribal, Federal, commercial, and other persons conducting field research on or involving restricted use pesticides. Certification in this category requires

concurrent certification in each pest control category identified in paragraphs (a)(1) through (10) of this section for which a person does demonstration or research involving the use or supervision of the use of restricted use pesticides for the type of pest control described in those categories, and in each application method-specific category identified in paragraph (b) of this section for which a person does demonstration or research involving the use or supervision of the use of restricted use pesticides using an application method described in those categories.

(b) *Application method-specific certification categories*—(1) *Soil fumigation applications*. This category applies to commercial applicators who use or supervise the use of a restricted use pesticide to fumigate soil. Certification in this application method-specific category requires concurrent certification in each pest control category identified in paragraphs (a)(1) through (10) of this section for which a person intends to perform soil fumigation.

(2) *Non-soil fumigation applications*. This category applies to commercial applicators who use or supervise the use of a restricted use pesticide to fumigate anything other than soil. Certification in this application method-specific category requires concurrent certification in each pest control category identified in paragraphs (a)(1) through (10) of this section for which a person intends to perform non-soil fumigation.

(3) *Aerial applications*. This category applies to commercial applicators who use or supervise the use of restricted use pesticides applied by fixed or rotary wing aircraft. Certification in this application method-specific category requires concurrent certification in each pest control category identified in paragraphs (a)(1) through (10) of this section for which a person intends to perform aerial application.

§ 171.103 Standards for certification of commercial applicators.

(a) *Determination of competency*. To be determined competent in the use and handling of restricted use pesticides by a State, Tribe, or Federal agency, a commercial applicator must meet the minimum age requirement specified in paragraph (a)(1) of this section and 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), the standards applicable to each pest control category in which an applicator seeks certification (paragraph (d) of this section), and the standards for each application method-specific category in which an applicator seeks certification (paragraph (e) of this section), as provided in 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.*

Examinations must 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. The proctor must do all of the following:

(A) Verify the identity and age of persons taking the examination by checking identification and having examinees sign an examination roster.

(B) Monitor examinees throughout the examination period.

(C) Instruct examinees in examination procedures before beginning the examination.

(D) Keep examinations secure before, during, and after the examination period.

(E) Allow only the examinees to access the examination, and allow such access only in the presence of the proctor.

(F) Ensure that examinees have no verbal or non-verbal communication with anyone other than the proctor during the examination period.

(G) Ensure that no portion of the examination or any associated reference materials described in paragraph (a)(2)(ii)(H) of this section is copied or retained by any person other than a person authorized by the certifying authority to copy or retain the examination.

(H) 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.

(I) Review reference materials provided to examinees after the exam is complete to ensure that no portion of the reference material has been removed or destroyed.

(J) 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.

(K) Comply with any other requirements of the certifying authority related to examination administration.

(iii) The examination must be closed-book. No reference materials may be used during the examination, except those that are approved by the certifying authority and provided by the proctor.

(iv) Each person seeking certification must present at the time of examination valid, government-issued photo identification to the certifying authority as proof of identity and age to be eligible for certification.

(v) The certifying authority must notify each examinee 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. Such additional methods must be part of 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 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 certification category and application method-specific 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.

(2) *Safety.* Measures to avoid or minimize adverse health effects, including all of the following:

(i) Understanding the terms "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) Presence of pollinators.

(v) Drainage patterns.

(4) *Pests.* The proper identification and effective control of pests, including all of the following:

(i) Common features of pest organisms and characteristics of damage needed for pest recognition.

(ii) Recognition of relevant pests.

(iii) Pest development, biology, and behavior as it may be relevant to problem identification and control.

(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 formulations of pesticides, solutions, and gases.
- (ii) Knowledge of which application method to use in a given situation and when certification in an application method-specific category is required in accordance with paragraph (c) of this section.

(iii) Relationship of application and placement of pesticides to 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 for certified commercial applicators who supervise noncertified applicators using restricted use pesticides.

(ii) Requirements to keep records of pesticide safety training for noncertified applicators using 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 appropriate State, Tribal, and Federal laws and regulations to noncertified applicators working

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 the public and their clientele.

(iii) Appropriate product stewardship for certified applicators.

(d) *Specific standards of competency for each pest control category of commercial applicators*. Commercial applicators must demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides for each pest control category for which they intend to apply restricted use pesticides through written examinations. The minimum competency standards for each category of pest control are listed in paragraphs (d)(1) through (10) of this section. Examinations for each pest control category certification listed in § 171.101(a) must be based on the standards of competency specified in paragraphs (d)(1) through (11) 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) *Plant*. 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) *Animal*. Applicators applying pesticides directly to animals 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 which 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 such as pollinators, and the proper disposal of unused treated seeds.

(5) *Aquatic pest control*. Applicators must demonstrate practical knowledge of the characteristics of various water 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, techniques to minimize non-target exposure runoff, drift, and excessive foliage destruction, and recognition of target pests. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants and pests to be controlled, for drift, for persistence beyond the intended period of pest control, and for non-target exposures.

(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 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) *Predator pest 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 problem identification and control.

(i) *Sodium cyanide.* Applicators must demonstrate comprehension of all relevant 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 and published in the **Federal Register** (40 FR 44726, September 29, 1975) (FRL 436-3).

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.

(ii) *Sodium fluoroacetate.* Applicators must demonstrate comprehension of all relevant 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 and published in the **Federal Register** (49 FR 4830, February 8, 1984) (FRL 2520-6). 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, human, domestic animals, or non-target wild animals.

(11) *Demonstration pest control.* Applicators demonstrating the safe and effective use of restricted use pesticides to other applicators and the public 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.

(e) *Specific standards of competency for each application method-specific certification category of commercial applicators.* In order to apply a restricted use pesticide using any of the application methods identified in this paragraph, a commercial applicator must first obtain the appropriate application method-specific certification as provided in this paragraph. This requirement is in addition to the requirements of paragraphs (c), (d), and (e) of this section. The competency standards for each application method-specific certification category are specified in paragraphs (e)(1) through (3) of this section.

(1) *Soil fumigation application.* Commercial applicators performing soil fumigation applications of restricted use pesticides 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) Fumigant applicators, fumigant applicator tasks, and the safety information that certified applicators must provide to noncertified applicators using fumigants under their direct supervision.

(C) Entry-restricted periods for different tarped and untarped field application scenarios.

(D) Recordkeeping requirements.

(E) Special label provisions of 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 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 to take samples.

(G) Buffer zones, including procedures for buffer zone monitoring.

(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) Incompatibility 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 each soil fumigant.

(B) Water-run and non-water-run application methods.

(C) Site characteristics that can be used to prevent fumigant exposure.

(D) Understanding temperature inversions and their impact on soil fumigation application.

(E) Weather conditions that could impact timing of soil fumigation application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications during specific weather conditions.

(F) Conducting pre-application inspection of application equipment.

(G) Understanding the purpose and methods of soil sealing, including the factors that determine which soil sealing method to use.

(H) Understanding the use of tarps, including the range of tarps available, how to seal tarps, and labeling requirements for tarp removal and perforation.

(I) Calculating the amount of product required for a specific treatment area.

(J) Understanding the basic techniques for calibrating soil fumigation 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 fumigation application, assessing soil moisture, and correcting for soil characteristics that could hinder a successful soil fumigation application.

(D) Identifying pests causing the damage to be treated by the 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 fumigation management plan and resources available to assist the applicator in preparing a fumigation management plan.

(C) The party 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.

(2) *Non-soil fumigation applications.*

Commercial applicators performing fumigation applications of restricted use pesticides to sites 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:

(i) *Label & labeling comprehension.* Familiarity with the pesticide labels and labeling for products used to perform non-soil fumigation, including all of the following:

(A) 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 to take samples.

(G) First aid measures to take in the event of exposure to a fumigant.

(H) 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) Incompatibility 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 can be used to prevent fumigant exposure.

(C) Conditions that could impact timing of non-soil fumigation application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications when specific conditions are present.

(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 fumigation 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 to be treated by the 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 fumigation management plan and resources available to assist the applicator in preparing a fumigation management plan.

(C) The party 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) Identifying 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.

(3) *Aerial applications.* Commercial applicators performing aerial application of restricted use pesticides must demonstrate practical knowledge of the pest problems and pest control practices associated with performing aerial application, 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 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 application 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, 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.

(vi) *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.

(f) *Exceptions.* The requirements in § 171.103(a) through (f) of this chapter 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, a private applicator must be certified by an appropriate certifying authority as being competent 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 for predator pest control listed in paragraph (b) of this section, or the use or supervision of use of the restricted use pesticides using application methods specified in paragraph (c) 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 application method-specific category appropriate to the type and site of the application and in the predator pest control category for private applicators 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.

(2) *Safety.* Measures to avoid or minimize adverse health effects, including all of the following:

(i) Understanding the terms “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) Presence of pollinators.

(v) Drainage patterns.

(4) *Pests.* The proper identification and effective control of pests, including all of the following:

(i) Common features of pest organisms and characteristics of damage needed for pest recognition.

(ii) Recognition of relevant pests.

(iii) Pest development, biology, and behavior as it may be relevant to problem identification and control.

(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 formulations of pesticides, solutions, and gases.

(ii) Knowledge of which application method to use in a given situation and when certification in an application method-specific category is required in accordance with paragraph (c) of this section.

(iii) Relationship of application and placement of pesticides to 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 and complying with the Worker Protection Standard in 40 CFR part 170.

(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 chapter for certified 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 relevant persons.

(11) *Agricultural pest control*.

Practical knowledge of pest control applications to agricultural commodities including all of the following:

(i) Specific pests of 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 animal products based on formulation, application technique, age of animal, stress, and extent of treatment.

(b) *Predator pest control category for private applicators*. This category applies to private applicators that use or supervise the use of sodium cyanide in a mechanical ejection device to control regulated predators and private applicators that use or supervise the use of sodium fluoroacetate in a protective collar to control regulated predators. All private applicators that use or supervise the use of these restricted use pesticides for predator pest control must be specifically certified as competent by a certifying authority in accordance with the following competency standards:

(1) *Sodium cyanide*. Applicators must demonstrate comprehension of all relevant 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 and published in the **Federal Register** (40 FR 44726, September 29, 1975) (FRL 436-3). 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 FWS 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.

(2) *Sodium fluoroacetate*. Applicators must demonstrate comprehension of all relevant 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 and published in the **Federal Register** (49 FR 4830, February 8, 1984) (FRL 2520-6). 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, human, domestic animals, or non-target wild animals.

(c) *Application method-specific certification categories for private applicators*. In order to apply or supervise the use of restricted use pesticides using an application method described in this paragraph (c), private applicators must demonstrate practical knowledge related to the appropriate application method as provided in this paragraph (c). This requirement is in addition to certification in the general private applicator certification category specified in paragraph (a) of this section.

(1) *Soil fumigation application*. 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 fumigation applications, including all of 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) Fumigant applicators, fumigant applicator tasks, and the safety information that certified applicators must provide to noncertified applicators using fumigants under the direct supervision of certified applicators.

(C) Entry-restricted period for different tarped and untarped field application scenarios.

(D) Recordkeeping requirements imposed by product labels and labeling.

(E) Special label provisions of products containing certain active ingredients.

(F) 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 fumigation management plan and resources available to assist the applicator in preparing a fumigation management plan; the party 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.

(ii) *Safety*. Measures to minimize adverse health effects, including all of the following:

(A) Understanding how certified applicators, noncertified applicators using fumigants under the 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 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 to take samples.

(G) Buffer zones, including procedures for buffer zone monitoring.

(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) Incompatibility 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 each soil fumigant.

(B) Water-run and non-water-run application methods.

(C) Site characteristics that can be used to prevent fumigant exposure.

(D) Understanding temperature inversions and their impact on soil fumigation application.

(E) Weather conditions that could impact timing of soil fumigation application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications during specific weather conditions.

(F) Conducting pre-application inspection of application equipment.

(G) Understanding the purpose and methods of soil sealing, including the factors that determine which soil sealing method to use.

(H) Understanding the use of tarps, including the range of tarps available, how to seal tarps, and labeling requirements for tarp removal and perforation.

(I) Calculating the amount of product required for a specific treatment area.

(J) Understanding the basic techniques for calibrating soil fumigation 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 fumigation application, assessing soil moisture, and correcting for soil characteristics that could hinder a successful soil fumigation application.

(D) Identifying pests causing the damage to be treated by the 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 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 cannisters.

(D) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.

(vii) *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 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.

(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.

(2) *Non-soil fumigation applications*. 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 of the following:

(i) *Label and labeling comprehension*. Familiarity with the pesticide labels and labeling for products used to perform non-soil fumigation, including all of the following:

(A) Labeling requirements specific to non-soil fumigants.

(B) Labeling requirements for fumigation 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 fumigation management plan and resources available to assist the applicator in preparing a fumigation

management plan; the party 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.

(ii) *Safety*. Measures to minimize adverse health effects, including all of the following:

(A) Understanding how certified applicators, handlers, 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) When air concentrations of a fumigant triggers handlers to wear respirators or to exit the work area entirely.

(E) Steps to take if a person using a fumigant experiences sensory irritation.

(F) Understanding air monitoring, when it is required, and where to take samples.

(G) First aid measures to take in the event of exposure to a fumigant.

(H) 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) Incompatibility 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 can be used to prevent fumigant exposure.

(C) Conditions that could impact timing of non-soil fumigation application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications when specific conditions are present.

(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 fumigation 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 to be treated by the 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 soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and cannisters.

(D) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.

(viii) *Posting requirements.*

Understanding posting requirements, including all of the following:

(A) Identifying 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.

(3) *Aerial applications.* 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:

(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.

(D) Labeling-mandated recordkeeping requirements for aerial pesticide applications including application conditions if applicable.

(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 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 application 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, 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.

(d) *Private applicator minimum age.* A private applicator must be at least 18 years old.

(e) *Private applicator competence.* The competence of each applicant for private applicator certification must be determined by the certifying authority based upon the certification standards set forth in paragraphs (a) through (d) of this section in order to assure that private applicators are competent 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 (e)(1) of this section or a non-examination training process as described in paragraph (e)(2) of this section to assure the competence of private applicators in regard to the general certification standards applicable to all private applicators, and, if applicable, the specific standards for the predator pest control category and/or the standards for each application method-specific category in which an applicator is to be certified, as provided for in this section. The certifying authority must follow the labeling requirements for sodium fluoroacetate and sodium cyanide dispensed through an M-44 device to determine the competence of applicators in the predator control categories.

(1) *Determination of competence by examination.* If the certifying authority uses a written examination process to

determine the competence of private applicators, the examination process must meet all of the requirements of § 171.103(a)(2).

(2) *Becoming competent through training without examination.* Any applicant for certification as a private applicator may become competent by completing a training program approved by the certifying authority. A training program to establish private applicator competence must conform to all of the following criteria:

(i) *Positive photo identification.* Each person seeking certification must present a valid, government-issued photo identification 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 certification in application method-specific categories.* The training program for general private applicator certification must cover the competency standards outlined in paragraph (a) of this section. The training program for each application method-specific category for private applicator certification must cover the competency standards outlined in paragraph (c) of this section and must be in addition to the training program required for general private applicator certification.

§ 171.107 Standards for recertification of certified applicators.

(a) *Determination of continued competency.* Each commercial and private applicator certification shall expire 3 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 exams set forth in § 171.103(a)(2) of this

chapter and be designed to test the certified applicator's knowledge of current technologies and practices.

(2) *Continuing education programs.* A certified applicator may be found eligible for recertification upon successfully completing a continuing education program approved by the certifying authority and designed to ensure the applicator continues to demonstrate the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators. A recertification process that relies on a continuing education program to maintain applicator certification must meet all of the following criteria:

(i) The continuing education program designed for applicator recertification must be approved by the certifying authority as being capable of ensuring continued competency.

(ii) A private applicator continuing education program must require the private applicator to complete six continuing education units specifically related to the standards of competency outlined in § 171.105(a) before the expiration of the applicator's certification to qualify for recertification. To qualify for recertification for application method-specific categories, a private applicator continuing education program must require the private applicator to complete three continuing education units specifically related to the standards of competency outlined in § 171.105(c) for each relevant application method-specific category certification held by the applicator before the expiration of the applicator's certification.

(iii) A commercial applicator continuing education program must require the commercial applicator to complete six continuing education units specifically related to the core standards of competency for commercial applicators outlined in § 171.103(c) before the expiration of the applicator's certification. In addition, a commercial applicator continuing education program must require the commercial applicator to complete six continuing education units specifically related to the standards of competency outlined in § 171.103(d), (e), and (f) for each relevant pest control category and application method-specific category of certification held by the applicator before the expiration of the applicator's certification in order to qualify for recertification.

(iv) Any education program, including an online or other distance education program, that grants continuing education units must have a

process to verify the applicator's successful completion of the educational objectives of the program and positively identify the applicator taking the continuing education units consistent with the requirements of §§ 171.103(a)(2)(iv) and 171.105(e)(2)(i).

Subpart C—Supervision of Noncertified 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) 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.

(2) The certified applicator must be certified in each category as set forth in §§ 171.101(a) and (b) and 171.105(b) and (c) applicable to the supervised pesticide use.

(3) The certified applicator must ensure that any noncertified applicators working under his or her direct supervision have met the training requirements under paragraph (c) of this section.

(4) If the certified applicator is a commercial applicator, the certified applicator must prepare and maintain the records required by paragraph (e) of this section.

(5) The certified applicator must ensure that all noncertified applicators working under his or her direct supervision are at least 18 years of age.

(6) The certified applicator must ensure that a method for immediate communication between the certified applicator and each noncertified applicator working under his or her direct supervision is available.

(7) The certified applicator must ensure that the full labeling for the product(s) used during a supervised use is in the possession of each noncertified applicator during the use.

(8) The certified applicator must be physically present at the site of the use being supervised when required by the product labeling.

(9) The certified applicator must provide use-specific instructions for each application to each noncertified applicator, including labeling directions, precautions, and restrictions mandated by the specific site; the

interrelationship between 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); and how to use the application equipment.

(10) The certified applicator must ensure that before any noncertified applicator uses any equipment for mixing, loading, transferring, or applying pesticides, the noncertified applicator has been instructed in the safe operation of such equipment within the last 12 months.

(11) The certified applicator must ensure that before each day of use equipment used for mixing, loading, transferring, or applying pesticides is inspected for leaks, clogging, and worn or damaged parts. If worn or damaged parts or equipment are found, the certified applicator must ensure that any damaged equipment is repaired or replaced prior to use.

(12) 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 using restricted use pesticides under his or her direct supervision has the label-required personal protective equipment, that the personal protective equipment is worn and used correctly for its intended purpose, and that the personal protective equipment is clean and in proper operating condition.

(c) *Training requirement.* 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 § 170.201(c) within the last 12 months.

(3) The noncertified applicator has passed an examination covering the core standards of competency for commercial applicators outlined in § 171.103(c) within the last 3 years.

(d) *Noncertified applicator training programs.* (1) General noncertified applicator training must be presented to applicators either orally from written materials or audio visually. 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 at least 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 a State, Tribal, or Federal agency having jurisdiction.

(iii) Have completed a pesticide safety train-the-trainer program under 40 CFR part 170.

(3) The noncertified applicator training materials must include the information that noncertified applicators need 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) Format and meaning of information contained in pesticide labels and labeling, including safety information, such as precautionary statements about human health hazards.

(ii) Hazards of pesticides resulting from toxicity and exposure, including acute and chronic effects, delayed effects, and sensitization.

(iii) Routes by which pesticides can enter the body.

(iv) Signs and symptoms of common types of pesticide poisoning.

(v) Emergency first aid for pesticide injuries or poisonings.

(vi) How to obtain emergency medical care.

(vii) Routine and emergency decontamination procedures.

(viii) Need for and proper use of personal protective equipment.

(ix) Prevention, recognition, and first aid treatment of heat-related illness associated with the use of personal protective equipment.

(x) Safety requirements for handling, transporting, storing, and disposing of pesticides, including general procedures for spill cleanup.

(xi) Environmental concerns such as drift, runoff, and wildlife hazards.

(xii) Warnings against taking pesticides or pesticide containers home.

(xiii) Washing and changing work clothes before physical contact with family.

(xiv) Washing work clothes separately from the family's clothes before wearing them again.

(xv) Precautions required to protect children and pregnant women.

(xvi) How to report suspected pesticide illness to the appropriate State agency.

(xvii) Instructions that the certified applicator must provide use-specific instructions for each application to the noncertified applicator(s), including labeling directions, precautions, and restrictions mandated by the specific site; the interrelationship between 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); and how to use the application equipment.

(e) *Recordkeeping.* For each noncertified applicator who uses a restricted use pesticide under a commercial applicator's direct supervision, the commercial applicator supervising any noncertified applicator must collect and maintain at the commercial applicator's principal place of business for 2 years from the date of meeting the training requirements of paragraph (d) of this section, the following information:

(1) The noncertified applicator's printed name and signature.

(2) The date the training requirement in paragraph (d) of this section was met.

(3) The name of the person who provided the training or the certifying agency, as applicable.

(4) The supervising certified applicator's name.

(f) *Compliance date.* After [date 2 years and 60 days after date of publication of the final rule in the **Federal Register**], any certified applicator who supervises a noncertified applicator using a restricted use pesticide under his or her direct supervision must comply with the requirements of this section.

Subpart D—Certification Plans

§ 171.301 General.

(a) *Jurisdiction.* A certification issued under a particular certifying authority's certification plan is only valid within the geographical area covered by the certification plan approved by the Agency.

(b) *Status of certification plans approved before effective date.* A certification plan approved by EPA before the effective date of this part remains approved until [date 4 years and 60 days after date of publication of the final rule in the **Federal Register**], except as provided in paragraphs (c)(4) and (5) of this section.

(c) *Compliance dates.* (1) After [date 4 years and 60 days after date of publication of the final rule in the

Federal Register], a State, Tribe or Federal agency may only certify applicators of restricted use pesticides in accordance with a certification plan that meets or exceeds all of the applicable requirements of this part and has been approved by the Agency.

(2) A State, Tribe or Federal agency that currently has an EPA-approved plan for the certification of applicators of restricted use pesticides and that chooses to certify applicators of restricted use pesticides under this part must submit to EPA for review and approval a revised certification plan that meets or exceeds all of the applicable requirements of this part no later than [date 2 years and 60 days after date of publication of the final rule in the **Federal Register**].

(3) If the Agency approves a certification plan submitted no later than [date 2 years and 60 days after date of publication of the final rule in the **Federal Register**], a State, Tribe, or Federal agency may only certify applicators of restricted use pesticides in accordance with the approved revised plan.

(4) If after [date 2 years and 60 days after date of publication of the final rule in the **Federal Register**] EPA has received but not yet approved the State, Tribal, or Federal agency certification plan revision submitted no later than [date 2 years and 60 days after date of publication of the final rule in the **Federal Register**], the State, Tribe, or Federal Agency may continue to certify applicators under the certification plan approved before the rule's effective date until such time as EPA approves a revised certification plan that meets or exceeds all applicable requirements of this part.

(5) States, Tribes, or Federal agencies that do not have an EPA-approved certification plan before the effective date of this rule 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 after the effective date of this rule.

§ 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 submitted to and approved by the Agency.

(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 plan must list and describe the categories of certification from the certification categories listed in §§ 171.101(a) and (b) and 171.105(b) and (c), that will be included in the plan except that:

(i) A State may omit any unneeded certification categories.

(ii) A State may designate subcategories within the categories described in §§ 171.101(a) and (b) and 171.105(c) as it deems necessary, with the exception of the predator pest control categories outlined in §§ 171.101(a)(10) and 171.105(b).

(iii) A State may adopt additional certification categories for specific types of pest control or application methods not covered by the existing Federal certification categories described in §§ 171.101(a) and (b) and 171.105(b) and (c).

(3) For each of the categories adopted pursuant to paragraph (b)(1) of this section, the State 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.

(4) The State standards for the recertification of applicators of restricted use pesticides must meet or exceed those standards prescribed by the Agency under § 171.107.

(5) The State 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.

(6) The State certification plan must contain provisions for issuance of appropriate credentials or documents by the certifying authority verifying certification of applicators. The credential or document must contain all of the following information:

(i) The full name of the certified applicator.

(ii) The certification, license, or credential number of the certified applicator.

(iii) The type of certification (private or commercial).

(iv) The category(ies), including any pest control categories, application method-specific category(ies), and subcategory(ies) in which the applicator is certified.

(v) The expiration date of the certification(s).

(vi) If the certification is based on a certification issued by another State, Tribe or Federal agency, a statement identifying the State, Tribe or Federal agency certification upon which this certification is based.

(7) 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 directly under an approved State, Tribal or Federal agency certification plan and are not based on another certifying authority's certification.

(ii) The State certification regulations must provide that any certification that is based in whole or in part on the applicator holding a valid current certification issued by another State, Tribe or Federal agency terminates automatically if the certification on which it is based terminates for any reason.

(iii) 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 in accordance with paragraph (a)(6) of this section.

(b) *Contents of a request 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 from the certification categories.

(2) The application for Agency approval of a State certification plan must contain satisfactory documentation that the State standards for the certification of applicators of restricted use pesticides meet or exceed those standards prescribed by the Agency under §§ 171.101 through 171.105. Such documentation must include one of the following:

(i) A statement that the State has adopted the same standards for certification prescribed by the Agency under §§ 171.101 through 171.105 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 prescribed by the Agency under §§ 171.101 through 171.105. If the State selects this option, the certification plan must include both:

(A) A list and detailed description of all the categories, application method-specific categories, and subcategories to

be used for certification of private and commercial applicators in the State and a citation to the specific State laws and/or regulations demonstrating that the State has adopted such categories, application method-specific categories, and subcategories.

(B) A list and detailed description of all of the standards for certification of private and 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 pest control categories, application-method specific categories, or subcategories established by a State must be included in the application for Agency approval of a State plan and must clearly delineate the standards the State will use to determine if the applicator is competent.

(3) 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 certification plan must include a list and detailed description of all of the State standards for recertification of private and commercial applicators and a citation of the specific State laws and/or regulations demonstrating that the State has adopted such standards.

(4) 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 must include one or both of the following as applicable:

(i) A statement that the State has met or exceeded 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.

(5) The application for Agency approval of a State certification plan must include all of the following:

(i) A written designation of the State agency by the Governor of that State as the lead agency responsible for being the primary certifying authority and administering the certification plan in the State. The lead agency will serve as the central contact point for the Agency. The certification plan must identify the primary point of contact at the lead agency responsible for administering the 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 certification plan, the plan must identify all cooperators and list the functions to be performed by each agency or organization, including compliance monitoring and enforcement responsibilities. The plan must indicate how the plan will be coordinated by the lead agency to ensure consistency of the administration of the certification plan throughout the state.

(ii) A written opinion from the State attorney general or from the legal counsel of the State lead agency that states the lead agency and other cooperating agencies have the legal authority necessary to carry out the plan.

(iii) A listing of the qualified personnel that the lead agency and any cooperating agencies or organizations have to carry out the plan. The list must include the number of staff, job titles, and job functions of such personnel of the lead agency and any cooperating units.

(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 plan.

(6) The application for Agency approval of a State certification plan must include a complete copy of all State laws and regulations relevant to the certification plan. In addition, the 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 and falsification of

any records required to be maintained by the certified applicator.

(ii) Provisions for reviewing, and where appropriate, suspending or revoking an applicator's certification based on the applicator's conduct 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 certification plan.

(iii) Provisions for assessing criminal and civil penalties for violations of State laws or regulations relevant to the 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(c).

(vii) Provisions requiring persons who distribute or sell restricted use

pesticides to record and maintain at each individual dealership, for the period of at least 2 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 categories in which the applicator is certified.

(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 submit reports to the Agency in a manner and containing the information that the Agency requires, including all of the following:

(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, recertified, and total applicators holding a valid general private applicator certification at the end of the last 12 month reporting period.

(ii) For each application method-specific category specified in § 171.105(c), the numbers of new, recertified and total existing private applicators holding valid current certifications at the end of the last 12 month reporting period.

(iii) 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.

(iv) For each commercial applicator pest control certification category specified in § 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.

(v) For each application method-specific category specified in § 171.101(b), the numbers of new, recertified and total existing commercial applicators holding valid current certifications at the end of the last 12 month reporting period.

(vi) If a State has established subcategories within any of the commercial categories, the report must include the numbers of new, recertified and total commercial applicators holding valid certifications in each of the subcategories at the end of the last 12 month reporting period.

(vii) 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).

(viii) 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.

(ix) The number and description of enforcement actions taken for any violations of Federal or State laws and regulations involving use of restricted use pesticides during the last 12-month reporting period.

(x) A narrative summary and causal analysis of any misuse incidents or enforcement actions related to use of restricted use pesticides during the last 12 month reporting period. The summary should include the pesticide name and registration number, use or site involved, nature of violation, any adverse effects, most recent date of the certified applicator's certification or recertification and, if applicable, the date of qualification of any noncertified applicator using restricted use pesticides under the direct supervision of the certified applicator. This summary should include a discussion of potential changes in policy or procedure to prevent future incidents or violations.

(2) Any other reports that may be required by the Agency to meet specific needs.

§ 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 submitted to

and 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 plan must list and describe the categories of certification from the certification categories listed in §§ 171.101(a) and (b) that will be included in the plan except that:

(i) A Federal agency may omit any unneeded certification categories.

(ii) A Federal agency may designate subcategories within the categories described in §§ 171.101(a) and (b) as it deems necessary, with the exception of the predator pest control categories outlined in §§ 171.101(a)(10).

(iii) A Federal agency may adopt additional certification categories for specific types of pest control or application methods not covered by the existing Federal categories described in §§ 171.101(a) and (b).

(4) For each of the categories adopted pursuant to paragraph (b)(2) 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.

(5) 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.

(6) The Federal agency 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.

(7) The Federal agency certification plan must contain provisions for issuance of appropriate credentials or documents by the certifying authority verifying certification of applicators. The credential or document must contain all information listed in § 171.303(a)(6), except for the requirement to list the type of certification at § 171.303(a)(6)(iii).

(8) 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)(7).

(b) *Contents of a request 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 from the certification categories.

(2) The application for Agency approval of a Federal Agency certification plan must contain a statement that the Federal agency standards for certification of applicators of restricted use pesticides 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 certification plan must include both:

(A) A list and detailed description of all the categories, application method-specific categories, and subcategories to be used for certification of private and 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 pest control categories, application-method specific 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 delineate the standards the Federal agency will use to determine if the applicator is competent.

(3) The application for Agency approval of a Federal agency plan must include a statement that the Federal agency has adopted standards for recertification that meet or exceed the standards for certification prescribed by the Agency under § 171.107. If the Federal agency adopts its own standards for recertification, the application for Agency approval of a Federal agency certification plan must include a list and detailed description of all the standards for recertification adopted by the Federal agency.

(4) The application for Agency approval of a Federal Agency certification plan must contain a statement that the Federal agency standards for direct supervision of noncertified applicators by certified commercial applicators meet or exceed those standards prescribed by the Agency under § 171.201, or a statement that the Federal agency prohibits noncertified applicators from using restricted use pesticides under the direct supervision of certified commercial applicators.

(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)(6), the Federal agency may use administrative controls inherent in the employer-employee relationship to accomplish the objectives of § 171.303(b)(6). 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)(6)(vi).

(c) *Commitment to do annual reports.* 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(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.

(3) For each application method-specific category specified in § 171.101(b), the numbers of new, recertified and total existing commercial applicators holding valid current certifications at the end of the last 12 month reporting period.

(4) If the Federal agency has established subcategories within any of the commercial categories, the report must include the numbers of new, recertified and total commercial applicators holding valid certifications in each of those subcategories at the end of the last 12 month reporting period.

(5) 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).

(6) 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.

(7) The number and description of enforcement actions taken for any violations of Federal or State laws and regulations involving use of restricted use pesticides during the last 12-month reporting period.

(8) A narrative summary of misuse incidents or enforcement activities related to use of restricted use pesticides during the last twelve-month reporting period. This section should include a discussion of potential changes in policy or procedure to prevent future incidents or violations.

(d) *Commitment to do other reports.* The application for Agency approval of a Federal agency certification plan must include a commitment by the Federal agency to submit any other reports that may be required by the Agency to meet specific needs.

(e) *Additional requirements for certain application.* If applicators certified under the Federal agency plan will make any applications of restricted use pesticides in States or Indian country, the application for Agency approval of a Federal agency certification plan must meet 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 in States or Indian country, 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.

(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.

§ 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) must consist of a written agreement between the Tribe and the relevant EPA Region(s) that contains 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:

(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 the separate agreement and the respective roles, responsibilities, and relevant authorities of those parties.

(2) To the extent that an Indian Tribe is precluded from asserting criminal enforcement authority, the Federal government will exercise primary criminal enforcement authority for certification plans 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 incapable of exercising relevant criminal enforcement requirements. 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(i)(3) 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 asserting criminal enforcement authority, the Federal government will exercise primary criminal enforcement authority for certification plans 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 incapable of exercising relevant criminal enforcement requirements 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 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 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. The Agency shall make a written determination regarding the modified certification plan's compliance with the requirements of this part. Substantial modifications include the following:

(i) Deletion of a mechanism for certification and/or recertification.

(ii) Establishment of a new 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.

(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, and each application method, 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, including in each application method, 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 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

§ 171.309(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 § 171.309(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, a certified applicator's certification issued under an EPA-administered plan, if the Agency finds that the certified applicator has been convicted under section 14(b) of the Act, has been subject to a final order imposing a civil penalty under section 14(a) of the Act, 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 section 3(d) of the Act 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 the Act 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 a certified applicator's certification, the Agency will:

(i) Notify the certified applicator of all of the following:

(A) The 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 certified applicator may become certified or recertified.

(D) Any additional conditions the Agency may impose.

(ii) Provide the certified applicator an opportunity to request an informal hearing prior to final Agency action to deny, revoke or modify the certification.

(3) If a hearing is requested by a certified applicator pursuant to paragraph (e)(2)(ii) of this section, the Agency will do all of the following:

(i) Notify the certified applicator of the legal and factual grounds upon which the action to deny, revoke or modify the certification is based.

(ii) Provide the certified applicator an opportunity to offer written statements of facts, explanations, comments and arguments relevant to the proposed action.

(iii) Provide the certified applicator such other procedural opportunities as the Agency may deem appropriate to ensure a fair and impartial hearing.

(iv) Appoint an attorney in the Agency as Presiding Officer to conduct the 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)(iv) of this section shall do all of the following:

(i) Conduct a fair, orderly and impartial hearing, without unnecessary delay.

(ii) Consider all relevant evidence, explanation, comment and argument submitted to the Agency pursuant to

paragraphs (e)(3)(ii) and (iii) of this section.

(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 Section 16 of the Act.

(5) If the Agency determines that the public health, interest or welfare warrants immediate action to suspend the certified applicator's certification, 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 will be issued at the same time the suspension notice is issued.

(iv) 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).

(6) Any notice, decision or order issued by the Agency under paragraph (e) of this section, and any documents filed by a certified applicator in a hearing under paragraph (e)(2)(ii) of this section, shall be available to the public except as otherwise provided by section 10 of the Act or by part 2 of this chapter. Any such 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 section 10 of the Act or under part 2 of this chapter.

(f) *Restricted use pesticide 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 sixty 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 2 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 categories in which the certified applicator is certified.

(iii) 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, 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 section 14 of the Act, or 18 U.S.C. 1001.

(g) *Compliance date.* The only EPA-administered certification plans that will be effective after [date 60 days after date of publication of the final rule in the **Federal Register**] are those approved by the Administrator after [date 4 years and 60 days after date of

publication of the final rule in the **Federal Register**].

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