Appointment

From: Reed, Kristen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=76812549fbb44d1f8e9ef4e7cc247b5b-Reed, Kristen]
Sent: 4/16/2019 11:59:13 AM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Morris, Jeff [Morris.Jeff@epa.gov]; Hauff, Amanda [Hauff.Amanda@epa.gov]
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BCC: DCRoomEast3156/DC-EPA-EAST-OCSPP [DCRoomEast3156@epa.gov]

Subject: Pre-Brief for May 2nd NEJAC Meeting
Attachments: 1. NEJAC WPS Letter December 2018.pdf; 2. Worker Protection Standard FAQs Internal Deliverable.docx; 3. NEJAC Agenda. As of 4.10.19 - NEJAC-Public -Meeting-Agenda-April-2019-Draft-4-3-19.docx; 4. NEJAC Members.doc; 5. NEJAC Bios.docx; 6. OCSPP Letter to NEJAC Feb. 2016.pdf; 7. DRAFT NEJAC WPS Letter Oct. 2016.pdf; Briefing Packet. NEJAC May 2 Meeting 04.22.19.docx
Location: DCRoomEast3156/DC-EPA-EAST-OCSPP

Start: 4/24/2019 6:30:00 PM
End: 4/24/2019 7:00:00 PM
Show Time As: Busy

1. NEJAC WPS Letter December...
2. Worker Protection Stand...
3. NEJAC Agenda. As of 4.10.19 - N...
4. NEJAC Members.doc
5. NEJAC Bios.docx
6. OCSPP Letter to NEJAC Feb. 201...
7. DRAFT NEJAC WPS Letter Oct. ...
Briefing Packet. NEJAC May 2 M...

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December 18, 2018

Andrew Wheeler
Acting Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Acting Administrator Wheeler:

The National Environmental Justice Advisory Council (NEJAC) urges you to halt efforts to rescind portions of the Agricultural Worker Protection Standard and the Certification of Pesticide Applicators rule. NEJAC believes that the rules should be implemented as they are currently written to better protect farmworkers and rural, agricultural communities. We urge you to rigorously enforce these rules, as they provide the necessary protections to vulnerable farmworkers from exposure to toxic pesticides.

A. Farmworkers and their families are a vulnerable group of people that need strong EPA rules to protect them from pesticide exposure.

The EPA established the Worker Protection Standard and the Certification of Pesticide Applicators rule in part to protect non-English speaking farmworkers. According to the National Agricultural Workers Survey, more than half of U.S. farmworkers primarily speak Spanish,[1] but farmworkers across the country speak a variety of languages. Further, approximately 59% of farmworkers speak a little or no English; 38% cannot read English at all and another 23% can only read English a little.[2]

In addition to having limited English proficiency, many farmworkers also have concerns related to their immigration status. From 2013-2014, 73% of workers were

[1] U.S. DEP'T. OF LAB., FINDINGS FROM THE NAT'L AGRIC. WORKERS SURV. 2013-2014 (2016), *available at* https://www.doleta.gov/naws/pages/research/docs/NAWS_Research_Report_12.pdf. The preamble to the Worker Protection Standards summarizes the Findings from the National Agricultural Workers Survey as "Approximately 65% of the [farmworker] population speaks little of no English; 38% cannot read English at all and another r30% can only read English a little." 80 Fed. Reg. 67496, 67502.
[2] U.S. DEP'T. OF LAB., FINDINGS FROM THE NAT'L AGRIC. WORKERS SURV. 2013-2014 (2016).

foreign born, compared to 74% in 2010-2012.[3] The share of hired crop workers not legally authorized to work in the U.S. grew from 15% in 1989-1991 to almost 55% in 1999-2001, and has since fluctuated around 50%.[4] Undocumented workers are worried about speaking up with safety concerns or to learn their rights because they worry about retaliation[5] and that raising concerns will cost them their jobs.[6] Cultural barriers factor into farmworkers' vulnerability, as well, as many farmworkers are unaccustomed to standards, regulations, policies, procedures, and workplace culture in the U.S. Cultural norms in their communities may differ, and the workplace can be challenging, not just in terms of arduous working conditions, but in having to navigate within a different culture. Many farmworkers are also women, who frequently work throughout their pregnancies and have concerns about exposing their children to pesticides in utero. Further, most farmworkers live and send their children to school near the farms where they work. Farmworkers need safeguards to protect themselves and their families from pesticide exposure.

B. These provisions are incredibly important and protect this vulnerable population.

The purpose of the 2015 revisions to both the Worker Protection Standard and the Certification of Pesticide Applicators rule was to reduce occupational pesticide exposure and incidents of related illness among agricultural workers and pesticide handlers. Additionally, these revisions aim to protect bystanders and others from being exposed to agricultural pesticides. The Worker Protection Standard requires agricultural establishments to adopt workplace practices to reduce or eliminate exposure to pesticides and establish procedures for responding to exposure-related emergencies. These rules, in combination with other components of EPA's pesticide regulatory program, intend to prevent unreasonable adverse effects of pesticides among workers, handlers, and other persons who may be on or near agricultural establishments, including vulnerable groups, such as minority and low-income populations. The provisions regarding minimum age, designated representatives, and the application exclusion zone are essential to achieving this purpose.

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[3] *Id.*

[4] U.S. DEP'T. OF AGRIC., FARM LAB. (2018) https://www.ers.usda.gov/topics/farm-economy/farm-labor/#legalstatus.

[5] *See* Michael Frank, *Can America's Farms Survive the Threat of Deportations?*, ROUTE FIFTY (Jun. 7, 2017) https://www.routefifty.com/public-safety/2017/06/can-americas-farms-survive-threat-deportations/138471/ (explaining the fear farmworkers experience now that the U.S. Immigration and Customs Enforcement (ICE) have expanded their efforts to find undocumented workers).

[6] *See* Richard L. Gaw, *Twelve Arrested in ICE Raid at Mushroom Farm*, CHESTER COUNTY PRESS (May 3, 2017) http://www.chestercounty.com/2017/05/03/141298/twelve-arrested-in-ice-raid-at-mushroom-farm (explaining how ICE is increasingly targeting farms in Pennsylvania and the Northeast that employ undocumented workers).

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The minimum age requirement, the designated representative, and the application exclusion zone are essential for protecting the health of vulnerable farmworkers. The minimum age requirement ensures that children will not be harmed by pesticide exposure because it guarantees that children will not handle or apply pesticides. The Worker Protection Standard's designated representative requirement protects farmworkers by allowing farmworkers to have someone help obtain information about the pesticides that they may have been exposed to in the workplace. The application exclusion zone prohibits pesticide applicators from exposing people, including workers and non-workers, within the immediate area surrounding the application equipment. These rules represent a first step in protecting farmworker children, helping farmworkers obtain important information about their exposure to pesticides, and protecting people who work and live near farms from pesticide exposure.

1. Minimum age requirements protect vulnerable young people from harmful pesticide exposure.

Raising the minimum age to 18 for pesticide handlers and early entry workers protects adolescent farmworkers. Adolescent farmworkers are at risk of potential health effects from pesticide exposure because their bodies are still developing. Adolescent farmworkers are also put in jeopardy because their behavior is riskier than that of adults, which puts them and everyone nearby at risk. Youth under 21 years of age are not eligible to rent a car, for example, from most car rental companies, for the very reason that statistics indicate that younger drivers are more at risk for accidents due to lack of experience and a penchant for risk taking. For these reasons, thousands who commented on the proposed rules supported raising the age to 18 to protect teenagers from harm. The few commenters who supported a minimum age of 16 did not provide any research or data showing that 16 and 17-year old adolescents would not suffer adverse chronic effects from potential pesticide exposure from applying pesticides.

Reserving pesticide handlers' and applicators' jobs for adults is consistent with how the Fair Labor Standards Act already protects children. Provisions in the Fair Labor Standards Act prohibit anyone under the age of 18 from working in hazardous conditions. The Fair Labor Standards Act defines "oppressive child labor" as a condition of employment in which "any employee between the ages of sixteen and eighteen years is employed by an employer in any occupation … to be particularly hazardous for the employment of children between such ages or detrimental to their health or well-being."[7]

[7] 29 U.S.C. § 203(l)(2)

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2. **The Designated Representative requirement ensures that there is someone who can effectively communicate with farmworkers and obtain information about the pesticides they were exposed to in the workplace.**

Many farmworkers do not speak English or have a limited understanding of the language. Therefore, workers and handlers may be reluctant to request information for themselves due to their inability to communicate effectively with, or fear of retaliation from their employer, or because they may not be able to understand the information without help. The Worker Protection Standard allows farmworkers to designate a representative to obtain pesticide application information on their behalf. Without this right, the Worker Protection Standard will fail to ensure that vulnerable farmworkers know what pesticides they were exposed to and understand the potential adverse health effects of those exposures. Furthermore, having detailed information about the name and class of pesticide can help farmworkers seek and obtain an accurate diagnosis and proper medical care after a pesticide-poisoning incident.

3. **The Application Exclusion Zone is a first important step to protect farmworkers, their families, and their neighbors from pesticide exposure.**

An application exclusion zone is a 25-100-foot area immediately surrounding the application equipment during a pesticide application. If a pesticide applicator sees a non-trained and unprotected person within this zone, they must suspend the application and resume after the person leaves the area. The application exclusion zone provision establishes clear areas where pesticides can be sprayed in order to prevent others from harm. The rule recognizes that pesticide drift may affect neighboring farms. Recent cases in California and Florida have resulted in farmworkers suffering adverse health effects and even hospitalization from pesticide applications that have drifted from the farm where the application was occurring to a neighboring farm where workers were harvesting crops. These incidents not only led to illness and hardship to workers, but loss of production in the field, economic loss to the farms, lengthy investigations of the incidents, and fines for the farm that caused the incident. The application exclusion zone reduces the risk of these incidents from occurring.

C. **The EPA must protect and preserve the current rules.**

1. **These rules were created after a robust process.**

The Worker Protection Standard and the Certification of Pesticide Applicators rule were the result of numerous stakeholder and working group meetings over months

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and years. Stakeholders included farmworker organizations, health care providers, state regulators, educators and trainers, pesticide manufacturers, farmers, organizations representing agricultural commodity producers, and crop advisors.

The EPA received substantial feedback on the 2015 proposals to implement these protections, including over 2,400 written comments with over 393,000 signatures. Commenters included farmworker advocacy organizations, state pesticide regulatory agencies and organizations, public health organizations, public health agencies, growers and grower organizations, agricultural producer organizations, applicators and applicator organizations, pesticide manufacturers and organizations, Personal Protective Equipment manufacturers, farm bureaus, crop consultants and organizations, and others. The comments received covered a wide range of issues and took diverse positions. These issues ranged from protecting children from pesticide exposure because their developing bodies are susceptible to agriculture chemical exposure, to following the same guidelines that other agriculture-reliant states have implemented regarding a minimum age requirement of 18 for pesticide handlers.

The EPA engaged with these stakeholders formally through the National Assessment of the Pesticide Worker Safety Program, public meetings, federal advisory committee meetings, and a Small Business Advocacy Review Panel. The EPA also engaged stakeholders informally, meeting with farmworker organizations, with individuals and other stakeholder groups. For example, EPA Administrator Gina McCarthy met with farmworker women in California and found their concerns to be valid and their requests for stronger protections compelling.

Because the Worker Protection Standard and the Certification of Pesticide Applicators rule were developed and finalized through numerous stakeholder discussions and a formal administrative process designed to address real and urgent concerns and to withstand the whims of partisan politics, they must be preserved unless there is compelling new evidence that would warrant walking back the regulations as they now stand.

2. There is no new information justifying a rollback.

The current Administration has failed to present any new information that justifies rolling back the Worker Protection Standard or the Certification of Pesticide Applicators rule. No new studies or reports have been published that would change the exhaustive information, public comments, agency review, and debate that took place before the rules were finalized.

EPA's formal notice that it is considering undoing these new rules protecting farmworkers mentions the Pesticide Program Dialogue Committee meetings as

justification to reconsider the rules. However, those discussions do not provide support for ending these key farmworker protections. The Pesticide Program Dialogue Committee met on May 4, 2017 to discuss President Trump's Executive Order 13777 establishing a task force to evaluate existing regulations and make recommendations about potential regulatory repeal, replacements or modifications. The Pesticide Program Dialogue Committee attendees then expressed their thoughts, comments, and concerns about what pesticide regulations should be repealed, replaced, or modified. Numerous representatives from various organizations expressed concerns about eliminating provisions that protect these vulnerable farmworkers because they believed that these provisions protect workers, especially children, from the harmful effects of pesticide exposure. The organizations represented include the Migrant Clinicians Network, the Center for Biological Diversity, Farmworker Justice, Oregon Law Center, and Beyond Pesticides.

The Pesticide Program Dialogue Committee met again on November 2, 2017 to discuss provisions in the Worker Protection Standard and Certification of Pesticide Applicator rule that are the subject of the proposed rule change. Committee members representing diverse organizations agreed that the minimum age requirement for handling pesticides should be 18. The committee members also agreed on the importance of the designated representative requirement. One committee member representing a state pesticide regulatory organization volunteered to gather information about state laws that provide farmworkers a right to a designated representative and how those states have implemented this requirement. The committee also came to a consensus regarding the importance of the Application Exclusion Zone. Some committee members suggested forming a working group to address issues and concerns raised about its implementation.

During this public meeting, no members of the Pesticide Program Dialogue Committee proposed rolling back requirements in the Worker Protection Standard or the Certification of Pesticide Applicators rule. To the contrary, committee members representing diverse stakeholders strongly advocated for keeping the rules in place, and only proposed minor changes to help clarify or improve the rules changes. Even more important are the extensive public comments made from a wide variety of stakeholders; significant scientific studies included in the docket, and Environmental Protection Agency review and analysis over many years. This rulemaking process included over 15 years of outreach, meetings, and engagement with affected sectors and revealed overwhelming support for the provisions of the regulation. To overturn these three provisions, after such extensive and exhaustive work by the Agency, not only puts farmworkers and agricultural communities at greater risk, but undermines the Agency's own efforts. There is no reasonable justification for a roll back.

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3. Supreme Court precedent, recently confirmed by the Keystone XL decision, makes clear that the Administration may not rollback policy decisions without "good reasons" for the new policy.

The United States Supreme Court established a four-part test to determine whether a policy change is legal under the Administrative Procedures Act: "(1) the agency displays 'awareness that it is changing position;' (2) the agency shows that 'the new policy is permissible under the statute;' (3) the agency 'believes' the new policy is better; and (4) the agency provides 'good reasons' for the new policy." *Indigenous People's Network v. U.S. Dept. of State*, 2018 WL 5840768 *12 (D. Mont. Nov. 8, 2018) *citing F.C.C. v. Fox Television Stations*, 556 U.S. 502, 515-16 (2009).

The recent decision invalidating the U.S. Department of State's 2017 reversal of its 2015 decision not to approve the Keystone XL pipeline reaffirms Supreme Court precedent that "'even when reversing a policy after an election, an agency may not simply discard prior factual findings without a reasoned explanation.'" *Indigenous People's Network v. U.S. Dept. of State*, 2018 WL 5840768, (D. Mont. Nov. 8, 2018)(*citing Org. Vill. of Kake v. U.S. Dept. of Agric.*, 795 F.3d 956, 968 (9th Cir. 2015), *quoting Motor Vehicle Mfrs. Ass'n of the U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)). The Keystone XL decision reinforced the Supreme Court's holding that an "agency cannot simply disregard contrary or inconvenient factual determinations that it made in the past, any more than it can ignore inconvenient facts when it writes on a blank slate." *Fox*, 556 U.S. at 537.

As with the Keystone XL decision, the EPA cannot "ignore inconvenient facts" about pesticide harms to farmworkers and farmworker adolescents, nor can it reverse the Worker Protection Standards and Certification of Pesticide Applicators rule "without a reasoned explanation." Because there is no "reasoned explanation" to roll back these critical protections, we strongly urge EPA not to move forward with this proposal that is both illegal and harmful to vulnerable farmworkers.

CONCLUSION

For these reasons, the NEJAC strongly urges you to fully enforce the standards laid out in the current versions of the Worker Protection Standard and the Certification of Pesticide Applicators rule. These measures exist to protect vulnerable farmworkers and people living in rural, agricultural communities who need protection from the federal government in order to work safely. It is the duty of the Agency to ensure their health and safety. Farmworkers are essential to agricultural work, and without

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them the entire industry would fail. Therefore, it is necessary to guarantee that they are protected with the utmost care in order to ensure that the industry thrives with healthy workers.

Sincerely,

National Environmental Justice Advisory Council

Richard Moore
Chair

cc: NEJAC Members
Henry Darwin, Acting Deputy Administrator
Brittany Bolen, Associate Administrator for the Office of Policy
Matthew Tejada, Director for the Office of Environmental Justice
Karen L. Martin, Designated Federal Officer and NEJAC Program Manager

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December 2018

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NATIONAL ENVIRONMENTAL JUSTICE ADVISORY COUNCIL

NEJAC Member Biographical Summaries

February 2018

CHAIR

Moore, Richard

Los Jardines Institute

Mr. Moore served as the Executive Director of Southwest Network for Environmental and Economic Justice (SNEEJ), in Albuquerque, New Mexico, from 1993 to 2010. He came to Southwest Network after 12 years with the Southwest Organizing Project (SWOP) where he was the lead organizer and primary trainer of SWOP's organizing model. As a widely respected national leader in the area of environmental justice, Mr. Moore has served on numerous government and nongovernmental committees and panels, including chair of the National Environmental Justice Advisory Council (NEJAC), member of the National Council of Churches EcoJustice Task Force, and member of the Congressional Black Caucus National Environmental Policy Commission. In 2010, Mr. Moore transitioned from Director of SNEEJ to Senior Advisor. He currently is the Program Director for Los Jardines Institute in Albuquerque New Mexico. Los Jardines is a member of the Environmental Justice & Health Alliance for Chemical Policy Reform. Through this alliance, Los Jardines advocates for stronger, safer, and just chemical policies. Mr. Moore is a recipient of the 2005 Ford Foundation Leadership for a Changing World.

VICE CHAIR

Heaps, Jill Witkowski

Vermont Law School

Ms. Heaps currently serves as the director of the Environmental and Natural Resources Law Clinic and Assistant Professor of Law at Vermont Law School. Jill formerly served as Director of Choose Clean Water Coalition, which brings together more than 200 groups across the Chesapeake Bay watershed to work collaboratively towards clean water. Prior to her time in Maryland, Professor Heaps was the Deputy Director of the Tulane Environmental Law Clinic and the Waterkeeper at San Diego Coastkeeper. Ms. Heaps was selected by Harvard Law School to serve as a Wasserstein Public Interest Fellow for the 2012-2013 academic year. She received her Juris Doctor from Washington University School of Law and a Bachelor of Arts from the University of Notre Dame.

OTHER MEMBERS

Chase, Charles

University of Colorado

For the last 10 years, Mr. Chase used his position at the University of Colorado and working with the U.S. Environmental Protection Agency's (EPA) Community Action for a Renewed Environment (CARE) program to develop a stronger link between environmental justice communities and the students, faculty, and resources at the university. Mr. Chase also works as a teacher and manager for the Denver Housing Authority's Osage Café and Youth Culinary Academy. This program provides at-risk youth with training in culinary and restaurateur skill as well as developing life and work skills to enter the job market. He has worked with communities to address issues including post-disaster work in New Orleans and redevelopment and environmental health in Colorado, and has provided facilitation and

mentoring to CARE community projects across the United States. Mr. Chase worked on his doctorate in biology at Florida State University, and received the Master of Arts from University of Colorado and Bachelor of Science from Colorado State University.

Drew, Ellen E.
Rural Communities Assistance Corporation (RCAC)
For the past fourteen years, Ms. Drew has supervised RCAC's environmental rural development specialists in Colorado, New Mexico, Utah, and Arizona. She has more than 34 years of experience in the environmental arena with expertise in sustainable communities, pollution prevention, environmental justice, solid waste, water, wastewater, whole systems thinking, principle-based strategies, capacity and process development. Previously, she worked as the operations director for an environmental analytical laboratory, reviewing data and developing site cleanup strategies in conjunction with environmental engineering firms. Ms. Drew was the Founder and Executive Director of the Strategic Environmental Project Pipeline Foundation, Inc., an innovative national project database matchmaking funders with local community projects, and the Colorado Environmental Business Alliance (CEBA), a business association working internationally to expand market opportunities for Colorado's environmental products, services and technologies. She has a Bachelor of Science in biological agriculture from Colorado State University.

Edwards, Jabari O.
J5 GBL, LLC
Jabari O. Edwards, Sr. is a native of Columbus, Ms. He is the owner of J5 GBL, LLC, a project management firm, majority owner of The Bridge Group, LLC, an insurance brokerage firm, BH Properties, and North Atlantic Security Company. Having established personal and professional relationships throughout the United States, Jabari's focus is growing his organizational brand on a national and global level.

Jabari began his entrepreneurial career in January 2000, with the opening of an insurance agency. He was co-owner of H&E Construction, a minority owned company that focused on residential and small commercial projects. He has a proven track record of managing people and the timely delivery of projects. Upon the formation of The Bridge Group (larger clients include MGM Mirage, United States Secretary of State Global Embassy Arts, Southern Company) in 2007 (purchased from Wells Fargo), Jabari worked to build a relationship with Aon (the largest insurance brokerage and consulting firm in the world), and from there worked with management a team in Chicago to build Cornerstone Innovative Solutions (a division that partners and mentors minority firms). In 2010, Jabari worked with the CEO's of Wells Fargo global brokerage Dave Zuercher and Neal Aton, along with Anne Doss (head of banking relationships) to create a business model for Wells Fargo diversity initiative. In 2012, Jabari worked with Willis executives Kim Waller and Phil Styles to create Willis' business model, Willis Open. Jabari has testified in State of Mississippi hearings about ways to improve minority participation on state funded contracts.

In 2010, Jabari saw the need for a minority firm with scalability in the construction sector, and therefore he started J5 GBL. J5 has served as construction/project managers on many complex projects for many global companies around the country. J5 serves as the ground and building maintenance contract for Southern Company on their Kemper county MS Project, served civil contractor for Kior (bio fuel plant located in Columbus, MS). J5, in a contract assignment, serving as the project management firm, has been the first minority contractor in the history of Columbus MS. Ironically Jabari's father, Joe Edwards was the first African American elected official in the history of the city. Jabari's mission is to build a project

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management firm which combines unparalleled expertise with a commitment to real diversity. Working for the Greenfield Environmental Trust, J5 is now known around the country as one of the premier environmental management and environmental Justice firms in the South-East Region of the United States.

Jabari also served as a director on various boards, including Mississippi Health Trust Fund (appointed by Governor Haley Barbour this board managed and set the budget of the billions in funds received from the tobacco lawsuit), Vice-Chairman of Columbus Housing Authority and Chairman of the Board of Commissioners for the Columbus Utility Board. article was written about this program, in a national utility magazine, and duplicated by other energy providers. Currently Jabari serves on the Board of the Boys and Girls Club, Small Business Capitol Loan Fund Board (formerly the Minority Loan Fund Board), The North Mississippi Board for Regions bank, The Mississippi Business Finance Corporation/ Mississippi Development Bank (appointed by Governor Phil Bryant), and The United States EPA's The National Environmental Justice Advisory Council (NEJAC) (Appointed by EPA Administrator Scott Pruitt in December 2017).

He is married to the former Jewel Sherrod, and they have three children: Tori, Jabari Jr., and Joe. They are active members of Vibrant Church in Columbus, MS. He is active in his community, a Diamond Lifetime Member of the NAACP. He and Jewel started their non-profit Bubba's Hope to further their commitment to honor Jabari's father, Joe, by serving and help the less fortunate around the country.

Ellerbrock, Reverend Michael J.
Virginia Tech
Dr. Ellerbrock is a professor of environmental economics and ethics at Virginia Tech. In 1998, he founded the Virginia Natural Resources Leadership Institute (VNRLI). The VNRLI has served as a force for building collaborative problem-solving and consensus building skills in Virginia's difficult environmental arena. Now in its 14th year, VNRLI has trained 360 federal, state, industry, academic, and community activists in environmental conflict resolution that includes a core theme of environmental justice and racism. Dr. Ellerbrock has published on environmental justice. For example, his work, "Environmental Justice and the Big Flush," is about Hurricane Katrina. He also teaches about environmental justice in his courses and incorporates environmental justice into his Catholic ministry outreach. He received his doctorate in applied economics and a master's degree in recreation and parks administration from Clemson University as well as Bachelor of Science in recreation and parks from Texas A&M University. Dr. Ellerbrock has been just recently appointed by the Governor to Virginia's first Advisory Council on Environmental Justice.

Finley-Deville, Lisa
Mandan, Hidatsa, and Arikara (MHA) Nation Tomorrow
Lisa is an enrolled member of the Mandan, Hidatsa, and Arikara Nation also known as Three Affiliated Tribes. Lisa has lived her whole life in Mandaree, ND with her husband Walter Sr., five children and two grandbabies.

Lisa has won many awards such as the 2015 Gillette/Baker Achievement Award to receiving the 2015 North Dakota Human Rights Arc of Justice Award. Currently Lisa serves on the Vision West ND Project Consortium. Lisa assisted in creating grassroots group and president to Fort Berthold Protectors of Water and Earth Rights (POWER), a board member of the Dakota Resource Council (DRC) and of the Western Organization of Resource Council (WORC) and, DRC Oil and Gas Task Force. Lisa is mentor/advisor to the Modern Day Warriors Youth Group.

Lisa conducted the Mandaree Needs Assessment in 2012 after saving the Mandaree Post Office of permanent closure and seeing surrounding communities prosper economically from Oil boom. Lisa has given presentations on "Living with Oil and Gas" to DUKE University, the Minnesota State University Science Department's, and Nueta, Hidatsa & Sahnish College Leadership class and at the Annual Anthropology Conference in Pennsylvania. Lisa has testified on pipeline spills and its environmental destruction to the North Dakota and South Dakota Public Utilities Commission's. Lisa testified on behalf of the White Earth band of Ojibwe per Winona Laduke request on the pipeline spills and environmental destruction with brief on Living with Oil and Gas in Minnesota. Lisa testified in Washington D.C. that Native American student's need the $8,000 federal government allocated which students receive $5,800 and with federal lawmakers to lobby for tribal colleges need. Lisa Also testified in Washington D.C. on the Methane Rule, Pollution Standards. Also Lisa has written many letters for Public Hearings on Oil and Gas Development. Lisa work will be published in an education journal with Dr. Mikulak, UND.

Lisa discovered her passion for helping the Mandan, Hidatsa, and Arikara Nation communities and its enrolled members in 1999 with housing by taken part in creating in Native American Country homeownership programs. In the winter of 2010 Lisa realized the impact the oil and gas development has taken on Mandaree and the other Mandan, Hidatsa, and Arikara communities. Lisa says "The Bakken oil and gas development has brought much environmental and health impacts and has changed our way of life. We must protect our water, land, air that is life but also to educate. Also not to do away with oil and gas but hold industry accountable for cleanup by creating laws/codes (environmental justice) and enforcement, policy and procedures." In 2011 and to better understand the pursuing of her advocacy Lisa enrolled in the Ft. Berthold Community College B.S. Degree Program in Environmental Science which she received May 2015. Currently Lisa is enrolled in the Nueta, Hidatsa, and Sanish College (also known as Fort Berthold Community College) Native American Program.

Harris, Rita
Sierra Club
Ms. Harris is a long-time social justice activist/advocate. She has worked over the years with a wide variety of organizations including the Mid-South Peace & Justice Center, Mississippi River Basin Alliance, Tennessee Clean Water Network, Tennesseans for Fair Taxation, the NAACP, the League of Women Voters, and is a founding member of the Public Issues Forum. She has worked professionally with community groups and church groups on issues related to air toxics, solid waste, and environmental justice for over 25+ years. Appointed by Environmental Protection Agency Administrator Carol Browner to serve on the National Environmental Justice Advisory Council (NEJAC) from 1997-2001, she served on the Enforcement Sub-Committee and the Federal Facilities Workgroup. Most recently, Ms. Harris was appointed to participate in EPA's National Environmental Justice Advisory Council's (NEJAC) School Air Toxics Monitoring Workgroup in 2009-10. She has also participated on the Center for Disease Control (CDC) and the Agency for Toxic Substances & Disease Registry's (ATSDR) Serving Communities Workgroup (2010).

Ms. Harris is in her 18th year of work as an Environmental Justice Organizer with the Sierra Club working out of Memphis, TN. She works with community groups and interested citizens concerned about the health impacts of toxic air & water pollution, effective emergency planning for neighborhoods near large chemical plants, and the cleanup of contaminated properties. Ms. Harris regularly stands toe-

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to-toe with industry officials and polluting industries, challenging environmental permits and enforcement decisions. To assist in raising awareness, she offers Toxic Tours and designs easy-to-read community education fliers and brochures, such as publishing annual editions of the *Shelby County Terrible Ten Report*. In addition, *"Communities at Risk",* an air pollution video she conceived and produced with the help of a Memphis filmmaker, is added to her toolbox of items she uses to do outreach to community groups and individuals who desire to become activists. She believes that average citizens, regardless of their race or class, must be empowered to speak for themselves and to be included in decision-making that impacts their lives and their communities. Annually, she coordinates and co-hosts community environmental conferences where people from low-income neighborhoods, as well as the city at-large, come to network and gain knowledge on a variety of subjects. Ms. Harris promotes effective citizen participation in all areas of decision-making, and uses creative organizing techniques, networking, and collaborations to ensure successful campaigns. She promotes diversity, anti-racism, and cultural competency among environmental and social justice organizations by facilitating workshops for groups throughout the activist community. Her diversity-related website can be found at - www.openheartsminds.com

Holloman, Erica
Southeast CARE Coalition
Ms. Holloman began pursuing her scientific dreams at Hampton University where she earned a B.S. in marine and environmental science and an M.S. in biology with a concentration in environmental science. In January 2012, she became the first African American woman to obtain a doctoral degree from the School of Marine Science at the College of William & Mary, Virginia Institute of Marine Science (VIMS). Her area of expertise lies in the field of environmental risk assessments (human and ecological), community-based participatory research (CBPR), and environmental justice.

Currently, Ms. Holloman is serving as Coalition Coordinator for the Southeast CARE Coalition, a broad, grassroots, community-based partnership consisting of community residents, organizations, businesses, academic institutions, and government. She has worked on numerous project aimed at: 1) fulfilling an informational void regarding community specific impacts of toxic pollutant exposure on the environment and the health of the residents in the Southeast Community of Newport News, Virginia, and 2) generating action that improves local environmental quality and reduces associated risks and impacts. Ms. Holloman's goal is to provide communities affected by environmental injustices with scientifically sound, community- specific, environmental information. She currently serves on the advisory board for WE ACT for Environmental Justice, in the Washington DC, Federal Policy Office.

Sprayberry, Karen
South Carolina Department of Health and Environmental Control
Mrs. Sprayberry has worked with environmental justice communities for approximately 22 years; she began working at the South Carolina Department of Health and Environmental Control (SC DHEC) in the Superfund and Voluntary Cleanup Program/Brownfield program as a public participation coordinator. She initially began to work with the ReGenesis and its communities in Spartanburg, South Carolina, shortly after coming to SC DHEC; ReGenesis would later win environmental justice and redevelopment awards because of the over $250 million revitalization effort conducted within these communities. She attended many community and public meetings and slowly began to build trust with that community and its leaders. When it was time for SC DHEC to oversee work specifically within this

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community, a foundation of trust and understanding had been instilled so as there was more of a collaborative, problem-solving method instilled between the various parties as the issues were address.

In 2002, Mrs. Sprayberry went to work for the Environmental Community Liaison for SC DHEC. In this role, she worked with all the media (land, water, and air programs) on community involvement and environmental justice concerns. During this time, we also strived to enhance our culture within our agency on these items. In 2009, SC DHEC was awarded a cooperative agreement from the EPA. Mrs. Sprayberry oversaw that project called "Leaders in Environmental Action Pilots – LEAP". We were allowed to provide $25,000 to four environmental communities. These communities built capacity (leadership and partnerships) while identifying and addressing their environmental and social justice needs. After that project ended (three years later), SC DHEC held an SC Environmental Leadership Forum. We partnered with the University of South Carolina, Arnold School of Public Health, to develop our curriculum. The 19 students who were selected came from various walks of like. They were citizens, students, or represented environmental organizations, non-profit organizations, local governments, and industry. The participants came together during 4 1 ½ day workshops to learn about 1) Effective Leadership and Engagement, 2) Understanding Government and our Environment 3) Community Organization and Development 4) Strategies for Sustaining Your Initiatives. During the Forum, participants gained knowledge and insight, but they also developed a stronger understanding among one-another, even if they did not see things eye-to-eye. The EPA-Region 4 Office has since used this as a model. SC DHEC values public participation and environmental justice and continues to work closely with our communities across the state using the knowledge gained from experiences and our various partners along the way to conduct more meaningful involvement for all our stakeholders.

Mrs. Sprayberry now serves as the Special Advisor to the Director of Environmental Affairs at SC DHEC, with her specialty being environmental justice and community involvement; she retired in 2015 and now is a part-time employee. As well as working with the Director, she continues to work closely with the Environmental Justice and Community Involvement Liaisons and other public participation staff within SC DHEC. She has received both internal and external awards for her work at SC DHEC, including receiving a House Resolution from the S. C. House of Representatives in 2015. Another award she is proud of is from 2008, when SC DHEC was awarded the "U. S. EPA Environmental Justice Achievement Award" due to the public participation and environmental justice work conducted both internally and externally by her and her peers. In 2011, Mrs. Sprayberry conducted the "Fundamentals of Public Participation" training during the EPA's Community Involvement and Training Conference. Mrs. Sprayberry has a BA degree in Political Science from Columbia College.

Johnson, Cheryl
People for Community Recovery
As an environmental activist Ms. Johnson has been an effective community organizer across issues of the environment, health, housing, and safety. In her community, she has conducted workshops on these issues and has increased resident participation in civic education around policies and procedures of governmental entities. She has also provided training for environmental assessment and risk prevention. Ms. Johnson has been involved in EJ issues for over 30 years, working under the leadership of her mother, the late Hazel Johnson, who was one of the first members of NEJAC and known as "the mother of the environmental justice movement".

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LaPier, Rosalyn R.
Piegan Institute and Saokio Heritage
Rosalyn is an enrolled member of the Blackfeet Tribe of Montana and Red River Métis. Her career has been devoted to engendering positive change and development in Indigenous communities. She is the founder of Saokio Heritage (pronounced like Tokyo), a community-based organization developed by Indigenous women interested in revitalizing Native American languages and traditional ecological knowledge.

Rosalyn is an award winning Indigenous writer, ethnobotanist, and environmental historian. She is working on her third book project "Plants That Purify: The Natural and Supernatural History of Smudging," as a visiting Assistant Professor of Women's Studies, Environmental Studies and Native American Religion at the Harvard Divinity School for 2016-2017. Rosalyn has a Ph.D. in History from the University of Montana.

McClain, Mildred
Harambee House
Dr. Mildred McClain co-founded and currently serves as the Executive Director of the Harambee House/Citizens for Environmental Justice, a community based organization whose mission is to build the capacity of communities to solve their problems and to engage in positive growth and development. The organization was created in 1990, is located in Savannah, GA, and serves communities at the local, state, regional, national, and international levels.

Dr. McClain has been a human rights activists and teacher for over 40 years. She has served on numerous committees, commissions, working groups and boards. She created major partnerships with the Department of Energy, the Environmental Protection Agency, the Agency for Toxic Substances and Disease Registry, the Centers for Disease Control, and many community based organizations, with the goals of addressing public health and environmental justice issues and concerns. Under Dr. McClain's leadership for the past 27 years, the Black Youth Leadership Development Institute has trained over 3000 young people to serve as leaders in their communities. The goal of the work is to develop the capacity of communities to create lifestyles that promote health, wellness, and environmental sustainability through community gardens, health fairs, testing children for lead poison, and soil testing in contaminated communities.

McGee-Collier, Melissa
Mississippi Department of Environmental Equality
Melissa McGee-Collier commenced a career in state government in 1995, joining Mississippi's Department of Environmental Quality (MDEQ) as a Title V permit writer. From 2002-2010, Melissa assisted in the implementation of the agency's internal data management system, which led to the online electronic search system that allows for the public to view permitting and compliance information associated with permitted facilities.

In 2010, Melissa accepted the position of Director for MDEQ's Office of Community Engagement where she is responsible for overseeing the agency's overall community engagement and environmental justice strategy for addressing environmental justice and public involvement issues. She has worked to enhance individual and community participation in environmental decision-making and to increase community knowledge of programs and processes through educational outreach materials and

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activities. Her duties include ensuring that community engagement is fully integrated across the agency's functions. In 2014, the Small Business Environmental Assistance Program was placed within the Office of Community Engagement and Melissa currently serves as MDEQ Title V Small Business Ombudsman.

Melissa earned a Bachelor of Science degree in Chemical Engineering and a Master of Public Policy and Administration both from Mississippi State University. Melissa is a Board Certified Environmental Engineering Member of the American Academy of Environmental Engineers and Scientists, a member of the Academy of Certified Public Managers and the Mississippi Society of Certified Public Managers (MSCPM).

Orduño, Sylvia Marie
Michigan Welfare Rights Organization
Ms. Orduño has served on several formal and informal advisory committees through the City of Detroit, The University of Michigan, and alongside local and national issue groups. In May, 2015, she helped organize the International Social Movement Gathering on Affordable Water and Housing – a three-day event that included over 300 participants from 18 U.S. states (including DC), plus Canada, Mexico, Brazil, and Italy. Prior to this, Ms. Orduño was the National Co-Coordinator of the U.S. Social Forum in 2010 that brought over 18,000 activists from almost all 50 states and several nations to Detroit for a week-long series of panels, presentations, and strategy sessions on various social and economic issues.

Currently, Ms. Orduño splits her time between working at a non-profit agency for blind persons and being an active member of the National Coalition on the Human Rights to Water and Sanitation (NCHRWS), representing issues from the Michigan Welfare Rights Organization (MWRO) and the People's Water Board (PWB). Over the past decade, her volunteer work at MWRO has been focused largely on unaffordable utilities and housing problems, with a special focus on water-based issues. At MWRO, the members and community residents are informed and empowered on their rights and strategies to gain the assistance they need, including filing for hearings. Ms. Orduño works at the state and national level alongside many grassroots groups, organizations and dedicated community professionals to address and lobby on issues of poverty.

Orr, Jeremy F.
Michigan State Conference NAACP
Mr. Orr is the State Chairperson of Environmental & Climate Justice for the Michigan State Conference NAACP. In this role, Mr. Orr works with the NAACP's National ECJ Program and local units to address environmental injustices, including climate change, that disproportionately impact communities of color and low-income communities throughout Michigan and the U.S. The objectives of this work are to: reduce harmful emissions, advance energy efficiency and clean energy, and strengthen community resilience and livability.

Formerly, Mr. Orr worked as the Environmental Justice Coordinator for the Transnational Environmental Law Clinic at Wayne State University Law School. In that role, Mr. Orr also served as the Coordinator for the historic Michigan Environmental Justice Coalition. Before joining Wayne Law, Mr. Orr was the Executive Director of the Mid-Michigan Environmental Action Council where he led regional efforts to improve environmental and public health through river protection and restoration, stream monitoring, storm water management, food justice, and environmental justice programming. Additionally, Mr. Orr

spent three years as a Community Organizer with the Gamaliel Foundation where he organized around numerous social justice issues including the cleanup of a PCB-contaminated landfill.

Mr. Orr currently serves a Vice-Chair of the Environmental Justice Committee for the American Bar Association's Civil Rights and Social Justice Section. Mr. Orr sits on the Boards of Directors for two local nonprofits: East Michigan Environmental Action Council and Soulardarity. Mr. Orr earned his Bachelor's, Master's, and Juris Doctor from Michigan State University. Mr. Orr is also an attorney for the Detroit-based law firm Pierson McNichols, PLLC and is licensed to practice in Michigan State Courts and the U.S. District Court.

Osborne Jelks, Na'Taki
West Atlanta Watershed Alliance and Proctor Creek Stewardship Council
Mrs. Na'Taki Osborne Jelks is an environmental scientist, social change engineer, and educator working for a healthy, just, and sustainable future. She has been advancing equity and social justice at the local level for nearly 20 years---using her expertise and passion to address environmental challenges facing underserved communities in the Atlanta Region. She has made contributions through government, non-profit, and community-based organizations, as both a professional and community leader, to advance environmental justice in low-income and communities of color and to elevate marginalized community voices so that those most affected by changes in the region gain access to the decision-making tables where strategies are being planned and developed.

Eighteen years ago, she co-founded the West Atlanta Watershed Alliance (WAWA), a community-based organization comprised of residents living in the Proctor, Utoy, and Sandy Creek Watersheds, in Northwest and Southwest Atlanta, who are overburdened with environmental stressors and pollution but are often least represented at environmental decision-making tables. WAWA was established from community efforts to halt perceived discriminatory wastewater treatment practices in West Atlanta and has grown to become an impactful force in community-centered sustainable development. Mrs. Jelks is the organization's board chairperson. Under Mrs. Jelks' leadership, WAWA has led community-based efforts, for over a decade, to clean up, protect, and restore Northwest Atlanta's Proctor Creek Watershed. Once a source of pride for Northwest Atlanta communities, Proctor Creek is one of the most impaired waterways in Metro Atlanta. Historically, the creek was a place where kids played, people fished, and people were baptized. Today, the creek and the neighborhoods through which it flows are affected by 29+ documented pollution sources, and the watershed is plagued by social, economic, and health disparities. In part because of Mrs. Jelks' and WAWA's persistent advocacy and community engagement efforts, Proctor Creek is now the focus of federal attention and investments through the EPA's Urban Waters Federal Partnership. Mrs. Jelks was also heavily involved in WAWA's establishment of the Proctor Creek Stewardship Council (PCSC), a grassroots organization that engages Proctor Creek residents in community-driven, collaborative problem solving processes, along with government, academia, and other stakeholders, to identify innovative, community-engaged approaches for environmental restoration of the watershed. Since its formation, the PCSC has dramatically changed the dialogue on meaningful citizen engagement in the revitalization of the Proctor Creek Watershed. It now leans more toward respect for community leadership, local knowledge, and community needs than was previously experienced. Jelks is Co-Chair of the PCSC.

Randolph, Dennis
City of Grandview, Missouri
Mr. Randolph has B.S. and M.S. degrees in Civil Engineering as well as a Masters of Public Administration. As an engineer he has held responsible positions in city and county government in

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Michigan, Missouri, and Virginia, responsible for transportation, water and wastewater, environmental, community planning, parks, and public works activities. Mr. Randolph has many years of instructional experience at the adult level including instructor positions in the U.S. Army, Wayne State University, Western Michigan University, and currently at the University of Missouri – Kansas City where he teaches courses in civil and construction engineering. Mr. Randolph has nearly 100 published papers, many peer reviewed. He serves as a project panel member for the National Academy of Sciences National Cooperative Highway Research Program. He also is a Peer Reviewer for the American Society of Civil Engineers, a member of the Board of Directors for the Transportation Professionals Certification Board, and a Public Works Leadership Fellow for the American Public Works Association. In 2015 he was recognized as a Top 10 Public Works Official.

Rezentes, Cynthia Kim Len
Mohala I Ka Wai (People Thrive Where Conditions Are Good)
Ms. Rezentes currently serves as president of Mohala I Ka Wai (People Thrive Where Conditions Are Good), a nonprofit that seeks to steward Wai`anae Coast and Hawaii watersheds, with the goal of building a cultural learning center for traditional agricultural practices

Previously, Ms. Rezentes served as director for two land trusts. As a member of two neighborhood boards, Ms. Rezentes chaired committees related to planning and zoning, transportation, and housing, in addition to chairing each board at various times. Working as an electrical engineer for many years, Ms. Rezentes' professional background qualifies her to understand technical aspects related to development or infrastructure-type projects. Living in a primarily Native Hawaiian and low-income community that faces many environmental justice issues, Ms. Rezentes has fought for over 10 years for the closure of Oahu's only solid waste landfill, which is located on the border of her community. She is recognized by various organizations as a community leader with a concern for the environment, and involves herself with legislative issues by advocating for various environmental and social justice issues. Currently, she is a member of the local Board of Water Supply (BWS) Stakeholder Advisory Group which has guided the development of a 2030 Water Master Plan for infrastructure and water conveyance. The Advisory Group will now discuss financing policies to ensure implementation of the Master Water Plan while balancing the needs of all residents from low-income and up. Ms. Rezentes received her Bachelor of Science in electrical engineering from Gonzaga University and her Master of Science in electrical engineering from the University of New Mexico.

Sanders, Deidre
East Bay Community Energy
Dr. Sanders is currently the Director of Government and Community Affairs at East Bay Community Energy (EBCE) in San Francisco, California. She leads EBCE's commitment to develop, manage, and implement programs and initiatives' that promote EBCE and its interest in Alameda County and the greater Bay Area through outreach and interface with key stakeholders and community groups.

Dr. Sanders is the former Environmental Justice Program Manager at Pacific Gas & Electric Company (PG&E) in San Francisco, California. In this role, she served as a subject matter expert on environmental justice where she has been a part of PG&E's Environmental Policy Group since September 2007. Her primary responsibilities included leading the effort to advance the implementation and institutionalization of PG&E's Environmental Justice Policy, and providing direct project support by helping PG&E manage non-permit risks associated with new facility siting and ongoing operations,

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particularly those related to communities. Additionally, she was the lead for the identification and development of company response strategies associated with environmental justice and new laws and regulations, such as California's landmark climate change legislation, Assembly Bill 32, as well as other emerging issues.

In addition to her work for PG&E she is on the Green Advisory Council of the California League of Conservation Voters, a state-wide environmental organization that seeks to ensure good environmental policy development and implementation. She is also the American Association of Blacks in Energy lead on environmental justice concerns through its Legislative Issues and Public Policy section. Prior to joining NEJAC in 2012, she worked on the EPA National Advisory Committee for Environmental Policy and Technology (NACEPT) Subcommittee for Promoting Environmental Stewardship (2009-2010). Dr. Sanders earned her doctorate degree in public policy and politics from Claremont Graduate University and also a bachelor's degree in history and international relations from the University of Southern California.

Shabazz, Jerome

JASTECH Development Services and Overbrook Environmental Education Center

Jerome Shabazz is the founder and Executive Director of JASTECH (Juveniles Active in Science and Technology) Development Services, Inc. A not-for-profit organization developed in 1998, to promote environmental justice; encourage sustainable community development and to promote public health in urban communities. In 2002, JASTECH applied for and received a US Environmental Protection Agency (EPA) grant under the Clean Water Act to establish the Overbrook Environmental Education Center (OEEC), a community-based center dedicated to preserving our built and natural environments.

Under Mr. Shabazz's direction, the OEEC completed a Targeted Brownfields Assessments (TBA) and remediated environmental hazards from a Brownfield site in Western Philadelphia. The OEEC has trained thousands of students on the Clean Water Act and Toxic Substances Control Act, and other topics that reduces human exposure to toxic substances at home and school. The OEEC is nationally known for its Environmental Justice and project-based learning programs.

Prior to working in the non-profit sector, Mr. Shabazz worked for 25years in Water and Gas utilities. He served as Safety & Training Manager at the Philadelphia Gas Works - LNG Processing Division and was responsible for 49 CFR §193.2713 training in operations and maintenance; trained personnel and contractors on safety issues, codes, regulations, departmental standards, corporate policies and procedures. He also worked in the training, engineering and operations divisions at the Philadelphia Water Department. Mr. Shabazz is an adjunct professor and educator at both Community College of Philadelphia and Penn State University. In 2017, he was appointed to the PA Department of Environmental Protection's - Citizen Advisory Council and Environmental Justice Advisory Board. He is also a board member on Keep Pennsylvania Beautiful.

Shabazz earned his Masters of Science in Environmental Protection & Safety Management from St. Joseph's University and Bachelors of Arts in Organization Management from Eastern University. He has received numerous citations and award, most recently from the PA House of Representatives and City Council of Philadelphia for his commitment to Environmental Justice and Community Development.

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Shafiei, Fatemeh
Spelman College
Fatemeh Shafiei, Ph.D., is Associate Professor and Chair of the Department of Political Science and also serves as Co-Chair of Sustainable Spelman Committee. Dr. Shafiei is a member of the U.S. Environmental Protection Agency's National Environmental Justice Advisory Council (NEJAC). She has served as an environmental justice consultant for Centers for Disease Control and Prevention (CDC) and Bates College. She was a member of the Academic Advisory Board for the *Annual Editions: Sustainability*, which was published by McGraw-Hill Higher Education Contemporary Learning Series. She was an Environmental Fellow at Associated Colleges of the South. Dr. Shafiei has served as an invited speaker, panelist, chair, section chair, panel organizer, moderator, and discussant in numerous conferences and forums. Dr. Shafiei has also served as project director, co-project director, and partnership leader on numerous federal grants from US Environmental Protection Agency (EPA), and Department of Energy (DOE). In addition, she has served as project director for grants from UNCF/Mellon.

Dr. Shafiei has been an expert and a leader in advancing integration of sustainability into college, university, high school, and middle school curricula for more than two decades. To advance education for sustainability, she has planned, developed and conducted numerous workshops and institutes for college and university faculty; and for high school and middle school teachers. In addition, Dr. Shafiei has received funding for her research in the environmental policy area from US Environmental Protection Agency for "Environmental Policy an Innovation Grant: Emergency Planning and Preparedness".

Dr. Shafiei is very passionate about addressing environmental justice and has organized and led a broad spectrum of advocacy and educational projects. She has hosted and directed many projects such as, "Toxics Release Inventory Regional Workshop"; "Reimagining the Twenty-First Century through Advancing Education for Sustainability"; "Environmental Justice Summit"; "Environmental Lecture Series;" and "The Atlanta Environmental Summit: Linking Priorities from a Minority Perspective."

Dr. Shafiei received her B.A and her Ph.D. from the University of California, Riverside. Her research and teaching interests are in environmental policy, environmental justice, climate justice, environmental education, environmental determinants of health disparity, and international relations. Dr. Shafiei's publications are in the areas of environmental policy, environmental determinants of health disparities and environmental education.

Sheats, Nicky
Thomas Edison State College
Dr. Sheats is currently the director of the Center for the Urban Environment at the John S. Watson Institute for Public Policy of Thomas Edison Sate College where he has defined the primary mission of the Center as providing support for New Jersey's environmental justice community. He has also been a member of the New Jersey Environmental Justice Alliance, New Jersey's only statewide environmental organization that focuses solely on environmental justice (EJ) issues, since its inception in 2003. Dr. Sheats has also been appointed to New Jersey's Clean Air Council and in recent years has expanded his work to a national level where he is currently a member of the Environmental Justice Leadership Forum on Climate Change and the EPA's Clean Air Act Advisory Committee. He also served as a member of the NEJAC's School Air Toxics Working Group and the Deep South Center for Environmental Justice's New Orleans and Delta Area Environmental Justice Policy Task Force at Dillard University. He is also

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serving as a lead author on the public health chapter of the National Climate Assessment and will serve on the National Association for the Advancement of Colored People's Environmental and Climate Justice Advisory Panel.

Dr. Sheats received his doctorate in earth and planetary sciences at Harvard University where his field of study was biological oceanography and his specialty was stable isotope biogeochemistry. He also has an undergraduate degree in economics from Princeton University and a law degree from Harvard Law School. He worked as a public interest attorney for almost eight years after graduating from law school. During that time, Dr. Sheats served as a law clerk for the Chief Judge of the District of Columbia Court of Appeals, as a landlord-tenant and housing attorney at Camden Regional Legal Services, as a public defender in New Brunswick, New Jersey, and as a legal instructor at a community legal education and college preparatory program in Harlem.

Shoemaker, Paul
Boston Public Health Commission
Mr. Shoemaker is currently the Associate Director of the Environmental & Occupational Health Division of the Boston Public Health Commission. He is responsible for overseeing and coordinating the broad range of the office's activities including direct inspector response to potential environmental health hazards and enforcement of local and state public health regulations relating to indoor and outdoor air pollution, lead paint, asbestos, solid waste, and other noxious industries, chemical releases, and exposures of all kinds. Mr. Shoemaker represents the office in collaborative efforts with community partners, academic institutions, and governmental agencies around such topics as climate change mitigation and adaptation planning, community planning policy and health impact assessment of developments, and the creation or modification of regulations. In working with community partners, academic researchers, and other governmental agencies, Mr. Shoemaker strives to bring environmental justice and health equity concerns to the table as guiding principles for policy and program development.

Among his achievements are a successful effort in 2007 to introduce hybrid taxi cabs to Boston to reduce vehicle emissions and save drivers fuel costs; regulations passed in 2011 governing the operation of nail salons in Boston to promote worker and client health and safety; and the Boston Safe Shops Program, which provides education and technical assistance to help small businesses implement the use of alternative products and best practices to reduce pollution and protect the health of their workers. The program was recognized by the EPA with an Environmental Merit Award and by the National Association of County and City Health Officials as a Model Practice.

Mr. Shoemaker also serves as President of the Board of Directors of ESAC ([HYPERLINK "http://www.esacboston.org/"][HYPERLINK "http://www.esacboston.org/"], a multi-service community stabilization organization providing GED education programming to at-risk youth, foreclosure prevention counseling, and free/low-cost home repair services to low income seniors. Mr. Shoemaker holds a Masters of public health from the George Washington University, a Master's in business administration from Boston University and a Bachelor of Arts in biology from The Johns Hopkins University.

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Tilchin, Michael
Jacobs Engineering
Mike Tilchin is a Vice President at Jacobs Engineering, which recently acquired CH2M, where Mike has worked since 1983. Mike serves as Jacobs' Client Executive for the company's EPA Portfolio. Mike has 36 years' experience in environmental science and engineering, project and program management. His work for EPA includes support for Superfund, water security, water infrastructure finance, and for the Office of Sustainable Communities. Under Mike's leadership, his company has had a major role in the clean up several hundred Superfund sites in multiple EPA Regions. Mike was appointed by EPA to serve on the National Advisory Council for Environmental Policy and Technology (NACEPT) Superfund Subcommittee in 2002- 2004, developing policy recommendations for the Superfund program. He has been active in EPA's national and regional environmental justice and equitable development forums for several years. Mike also serves on the Board of Directors of the CH2M HILL Plateau Remediation Company at the Department of Energy site in Hanford, Washington.

Mike is a member of the American Society of Civil Engineers (ASCE), and serves on ASCE's Committee on America's Infrastructure. For ASCE's 2017 Report Card on America's Infrastructure, Mike was a lead author on the assessment of the nation's Hazardous Waste Infrastructure. He is also an active member of the American Council of Engineering Companies' Superfund Work Group.

Mike served on the Board of Directors of the Anacostia Watershed Society (AWS) from 2005 through 2017, and was Board Chair from 2010 - 2013. The AWS is an environmental group dedicated to cleaning up the Anacostia River and improving the quality of life for communities in the watershed through stewardship, advocacy, recreation, and education programs. Mike received a B.S. in geology from the University of Michigan, and an M.S. in Biological and Agricultural Engineering from North Carolina State University. He is a professional engineer licensed in the State of Virginia, certified as a LEED Green Associate, and is an Adjunct Professor in the Department of Natural Resources Science at the University of Rhode Island.

Trevino-Sauceda, Hermila "Mily"
Arlianza Nacional de Campesinas
Ms. Trevino-Sauceda is the third of ten children, born in Bellingham, Washington, to a migrant farmworker family. Since the age of eight, she was a farmworker in Idaho and California, and eventually became a union farmworker and organizer with the UFW in the 1970s and early 1980s. She co-founded "Mujeres Mexicanas" (Mexican Women), in the Coachella Valley – a campesinas' advocacy group. In 1991, Ms. Trevino-Saucedo returned to school and obtained her Associate of Arts in chicano studies. She went on to earn credits for a minor in women studies at Cal State Fullerton in 1997. She then earned her Master's Degree in social sciences, with focuses on rural development, women's leadership, and oral history at Antioch, Ohio.

Ms. Trevino-Sauceda worked for 12 years as the Executive Director of Líderes Campesinas. In addition, she worked with California Rural Legal Assistance Migrant Project for 10 years; representing farmworkers as a community worker/advocate. In 2011, she co-founded and is the current President of Alianza Nacional de Campesinas – a national farmworker women's alliance. As a consultant, she provides technical assistance to Pequeños Agricultores de California – a group of Latino organic small farmers and ranchers in San Benito County. She also provides technical assistance to the National Hmong American Farmers, ensuring their small farmers are trained in business regulations and labor laws, including prevention of pesticides poisoning. She sits on numerous state and national boards and

task forces representing Latinas, farmworker community & immigrant women in general on health, violence against women, labor, education, environmental and gender issues.

Throughout her activism, Ms. Trevino-Sauceda has received numerous recognitions & awards, including "100 Heroines of the World" in 1998; the Alston/Bannerman Fellow in 2002; and the Ford Foundation and NYU "Leadership for a Changing World" award in 2004. She was recognized twice in 2006, by People Magazine. In 2009, she was honored by Líderes Campesinas in California for her 30+ years of distinguished leadership, and in 2011 was recognized by the US EEOC.

Whitehead, Sandra F.
National Environmental Health Association
Sandra Whitehead, PhD, MPA, is responsible for capacity building project and program development from grant writing through final implementation and reporting at the National Environmental Health Association. Dr. Whitehead has been involved in environmental justice efforts since the late 1980's while working in Florida, assisting high-need residents with contaminated wells connect to city water. She has worked with communities on their environmental and social justice issues through the Florida Brownfields Association's Environmental Justice Committee. Dr. Whitehead has created opportunities for communities to participate in decisions affecting their health by training more than 400 public health professionals about how to perform health impact assessments (HIAs), and leading 15 HIAs to empower community members with information and tools to advocate for solutions that positively impact their wellbeing and long-term health.

Wilson, Sacoby
Maryland Institute of Applied Environmental Health
Dr. Sacoby Wilson is an Assistant Professor with the Maryland Institute for Applied Environmental Health and Department of Epidemiology and Biostatistics, School of Public Health, University of Maryland-College Park. Dr. Wilson has over 15 years of experience as environmental health scientist in the areas of exposure science, environmental justice, environmental health disparities, community-based participatory research, water quality analysis, air pollution studies, built environment, industrial animal production, climate change, community resiliency, and sustainability. He works primarily in partnership with community-based organizations to study and address environmental justice and health issues and translate research to action.

Dr. Wilson is Director of the Community Engagement, Environmental Justice and Health (CEEJH) Initiative. CEEJH is focused on providing technical assistance to communities fighting against environmental injustice and environmental health disparities in the DMV region and across the nation. Through CEEJH, Dr. Wilson is engaging communities in the Washington, DC region on environmental health issues including exposure and health risks for individuals who fish and recreate on the Anacostia River; use of best management practices to reduce stormwater inputs in the Chesapeake Bay; built environment, environmental injustice, and vectors in West Baltimore; cumulative impacts of environmental hazards on air quality in Brandywine, MD; goods movement, industrial pollution, and environmental injustice in South Baltimore, MD; environmental justice and health issues in Buzzard Point area of Washington, DC; industrial chicken farming on Maryland's Eastern Shore; health impact of assessment in the Sheriff Road community; and other topics. In addition, he is working with schools in the region on pipeline development efforts in the STEM+H disciplines (Science, Technology, Engineering, Mathematics, and Health).

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He has worked on environmental justice issues including environmental racism with community-based organizations through long-term community-university environmental health and justice partnerships in South Carolina and North Carolina including the Low Country Alliance for Model Communities (LAMC), in North Charleston, South Carolina; the West End Revitalization Association (WERA) in Mebane, NC; and the Graniteville Community Coalition (GCC) in Graniteville, SC. He has provided technical assistance to REACH in Duplin County, NC; RENA in Orange County, NC; and the NC Environmental Justice Network.

Dr. Wilson has been very active professionally as an environmental justice advocate. He is a Co-Founder of the DC/Maryland/Virginia (DMV) Environmental Justice Coalition. He is a member of the USEPA's National Environmental Justice Advisory Council (NEJAC), a past Chair of the APHA Environment Section, on the Board of Community-Campus Partnerships for Health, a former member of the Board of Scientific Counselors for the CDC NCEH/ATSDR, and former Chair of the Alpha Goes Green Initiative, Alpha Phi Alpha Fraternity, Inc. He is also a senior fellow in the Environmental Leadership Program.

Dr. Wilson has received many awards for his contributions and achievements as an environmental justice researcher and advocate. He received the University of the Maryland Council on the Environment Junior Faculty of the Year award in 2016. He received the APHA Environment Section Damu Smith Environmental Justice Award in 2015. From the University of Maryland School of Public Health, he received the George F. Kramer Practitioner of the Year Award (2014-2015) and the Muriel R. Sloan Communitarian Award (2012-2013). He also received the Reverend Dr. Martin Luther King Jr. Social Justice Award from the University of South Carolina in 2011. He received a USEPA Environmental Justice Achievement Award given to Low Country Alliance for Model Communities, North Charleston, SC and Mitigation Agreement Committee. Additionally, Dr. Wilson received the Steve Wing International Environmental Justice Award in 2008.

Wright, Kelly C.
Shoshone Bannock Tribes
Mr. Wright currently serves as an alternate on the following EPA committees: Regional Tribal Operation Committee for Region 10; National Tribal Caucus; Tribal Science Council, and the National Tribal Toxic Committee. In this position, his work experience (30 years) includes both federal, State, Tribal and private. Mr. Wright obtained a Bachelor's Degree in microbiology and a Master's Degree in environmental science with an emphasis on waste management. Being able to conduct environmental site assessment, he has been able to identify a variety of recognized environmental conditions which put a different perspective on things. Mr. Wright is also a team member of the newly formed Natural Resource Damage Assessment Team for the Southeast Idaho Phosphate Mining where there are 17 mine sites.

Youngerman III, Dewey F.
Continental Maritime of San Diego
Mr. Youngerman is an environmental, occupational health, safety, and industrial hygiene professional with 32 years of experience identifying, evaluating, and mitigating environmental and occupational health stressors. Currently working for the Huntington Ingalls Industries subsidiary, Continental Maritime of San Diego, he has developed a keen ability to anticipate, recognize, evaluate, communicate

and control stressors arising from the work place that may result in illness or affect the physical and psychological well-being of local residents, employees and the environment. Stressors of particular interest to Mr. Youngerman include biological, chemical, physical, ergonomic, and psychosocial. He has had significant experience exploring these interests working in the San Diego shipyards and previously via emergent and post-emergent spill and hazardous waste disposal site, oil and gas, and military facility EHS management. Through business and community partnerships he has helped complete significant risk assessments and created sustainable, socially equitable solutions. He is seen by the local community planning group as an unbiased industrial information source in the environmental justice community where he works.

When not at work Mr. Youngerman helps his wife raise the most recent six of 70 children (2 biological, 4 adopted and 64 Foster) most of which are medically challenged. He is the first to admit his wife does the heavy lifting as she teaches unconditional love for each other to the next generation.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 09 2016

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Margaret J. May
Chair, National Environmental Justice Advisory Council
c/o Ivanhoe Neighborhood Council
3700 Woodland Avenue
Kansas City, Missouri 64109

Dear Ms. May:

Thank you for your letter of March 19, 2015, regarding the National Environmental Justice Advisory Council's recommendations to the U.S. Environmental Protection Agency on the Agricultural Worker Protection Standard rule.

Your charge to provide advice and recommendations on the EPA efforts to improve the environment or public health in communities disproportionately burdened by environmental harms and risks is an important one. Please accept my sincere appreciation for the Council's dedication and hard work in providing insightful advice on how the agency can most effectively reduce pesticide exposure for vulnerable populations.

We recognize the serious impacts pesticides have on human health and the environment of communities working in the agricultural industry, especially youth, women of childbearing age and the elderly. We are especially grateful that the Council has provided suggestions on how the agency might best engage historically underrepresented communities and those persons with limited English proficiency.

As you know, the rule became final on January 1, 2016, and it incorporates most of NEJAC's recommendations. For the first time ever, there is a minimum age requirement, and children under 18 are prohibited from mixing, loading or applying pesticides, except when they are related to the owner. Improvements have been made to the training and record-keeping provisions. The grace period has been eliminated, and annual training on required protections is mandatory for farmworkers. Training has been expanded to include instruction on reducing take-home exposure from pesticides on work clothing, as well as other safety topics. Records of training must be kept for 2 years, and a copy must be given to any worker who requests it.

Employers must display application information and safety data sheets at a central location within 24 hours of the end of application of a WPS-covered pesticide and before workers enter the treated area. These hazard materials must be displayed for 30 days after the restricted entry interval ends, retained for 2 years and made available to workers, handler, designated representatives or treating medical personnel upon request. The application information and safety data sheets are only required to be in English, which is one of the main reasons we included the option for a worker or handler to designate a representative to request that information on their behalf.

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The new WPS requires that employers provide respirator fit testing, training and medical evaluation that conforms to the Occupational Safety and Health Administration's standards for any handler required by the label to wear any respirator. It requires recordkeeping of completion of the fit test, training and medical evaluation.

Pesticide drift is a more complicated issue that is addressed in the new WPS through application exclusion zones and a requirement for applicators to suspend applications if a worker or other person is in the application exclusion zone.

The revised WPS delays compliance to give farmers, states and other stakeholders time to become familiar with the new requirements and to prepare for implementation. Compliance with most requirements begins on January 2, 2017.

Compliance for the following begins on January 1, 2018:

- pesticide safety training must include the new training points,
- revised pesticide safety information must be displayed, and
- handlers must suspend application if workers or other people are near the application equipment.

If new training materials are not available for use by July 2017, compliance with the new training points will not be required by January 1, 2018. Instead, it would be required 180 days (6 months) from the publication of a Federal Register Notice announcing the availability of new training materials.

Again, thank you for contributing to a robust dialogue on pesticide exposure prevention. I look forward to our continuing to work together to protect the health and environment of our most vulnerable communities.

Sincerely,

James J. Jones
Assistant Administrator

cc: NEJAC Members
Cynthia Giles, Assistant Administrator, Office of Enforcement and Compliance Assurance
Lawrence Starfield, Principal Deputy Assistant Administrator, Office of Enforcement and Compliance Assurance
Mustafa Ali, Senior Advisor to the Administrator, Office of the Administrator
Matthew Tejada, Director, Office of Environmental Justice
Karen L. Martin, NEJAC Program Manager, Office of Environmental Justice

Appointment

From: Bolen, Derrick [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1ffc58b0468c4deca51a8bad735b7d95-Bolen, Derr]
Sent: 4/1/2019 9:13:34 PM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]; Altieri, Sonia [Altieri.Sonia@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Bennett, Tate [Bennett.Tate@epa.gov]; Schwab, Justin [schwab.justin@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Erik Baptist (baptist.erik@epa.gov) [baptist.erik@epa.gov]
CC: Messina, Edward [Messina.Edward@epa.gov]; Mills, William T. [mills.williamt@epa.gov]; Lis-Coghlan, Kamila [lis-coghlan.kamila@epa.gov]

Subject: Meeting w/ Farmworker Justice
Attachments: EXTERNAL MEETING REQUEST - FJ Earthjustice.docx
Location: 3156 WJC EAST

Start: 4/12/2019 8:00:00 PM
End: 4/12/2019 8:45:00 PM
Show Time As: Busy

EXTERNAL MEETING REQU...

EXTERNAL MEETING REQUEST

Meeting Title:	Environmental Justice Concerns for Farmworker Communities	**Meeting Time/Date(s):**	4/12/19, 4 pm
Meeting Location:	1201 Constitution Ave. NW.	**Point of Contact:**	Virginia Ruiz

Purpose: Informational

Key Attendees:

Virginia Ruiz, Director of Occupational and Environmental Health, Farmworker Justice

Iris Figueroa, Staff Attorney, Farmworker Justice

Andrea Delgado, Healthy Communities Legislative Director, Earthjustice

Eve Gartner, Staff Attorney, Earthjustice

Discussion Topics:

Agricultural Worker Protection Standard / Certification of Pesticide Applicator Rule

- Implementation and enforcement
- Rulemaking – Application Exclusion Zones

Potential site visit to a farmworker community

Other Important Information:

Attachments:

Message

From: Kaiser, Sven-Erik [Kaiser.Sven-Erik@epa.gov]
Sent: 8/21/2019 9:09:12 PM
To: Bennett, Tate [Bennett.Tate@epa.gov]
CC: Keigwin, Richard [Keigwin.Richard@epa.gov]; Dunn, Alexandra [dunn.alexandra@epa.gov]; Bolen, Derrick [bolen.derrick@epa.gov]
Subject: RE: PRIA final wps language S.483 PRIA

Ex. 5 Deliberative Process (DP)

Office of Congressional and Intergovernmental Relations
1200 Pennsylvania Ave., NW (1305A)
Washington, DC 20460
202-566-2753 (o)
Ex. 6 Personal Privacy (PP)

-----Original Message-----
From: Kaiser, Sven-Erik
Sent: Wednesday, August 21, 2019 4:58 PM
To: Bennett, Tate <Bennett.Tate@epa.gov>
Cc: Keigwin, Richard <Keigwin.Richard@epa.gov>; Dunn, Alexandra <dunn.alexandra@epa.gov>; Bolen, Derrick <bolen.derrick@epa.gov>
Subject: RE: PRIA final wps language

On it - coming in a sec

Sven-Erik Kaiser
U.S. EPA
Office of Congressional and Intergovernmental Relations
1200 Pennsylvania Ave., NW (1305A)
Washington, DC 20460
202-566-2753 (o)
Ex. 6 Personal Privacy (PP)

-----Original Message-----
From: Bennett, Tate <Bennett.Tate@epa.gov>
Sent: Wednesday, August 21, 2019 4:54 PM
To: Kaiser, Sven-Erik <Kaiser.Sven-Erik@epa.gov>
Cc: Keigwin, Richard <Keigwin.Richard@epa.gov>; Dunn, Alexandra <dunn.alexandra@epa.gov>; Bolen, Derrick <bolen.derrick@epa.gov>

Subject: PRIA final wps language

Hey Sven! Do you mine sharing with Rick a version of the final when you have a second? I can’t pull it up on my phone.

Sent from my iPhone

Message

From: Altieri, Sonia [Altieri.Sonia@epa.gov]
Sent: 8/3/2019 3:21:40 AM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]
CC: Han, Kaythi [Han.Kaythi@epa.gov]; Dunton, Cheryl [Dunton.Cheryl@epa.gov]
Subject: FW: For your review: AEZ Communication Materials
Attachments: AEZ Communications Plan 7-26-19.docx; AEZ OPP Update 7-26-19.doc; AEZ QAs 7-26-19.docx; AEZ Tweets 7-24-19.docx

Flagging this for you……

From: Han, Kaythi
Sent: Wednesday, July 31, 2019 1:24 PM
To: Dunn, Alexandra <dunn.alexandra@epa.gov>
Cc: Altieri, Sonia <Altieri.Sonia@epa.gov>; Daguillard, Robert <Daguillard.Robert@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Malloy, Ruth <malloy.ruth@epa.gov>
Subject: FW: For your review: AEZ Communication Materials

Hi Alex,

Attached for your review are the communication materials for the AEZ proposal.

Ruth, could you also add these attachments for Alex's binder? Thanks.

Kaythi Han
Acting Communications Director
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(202) 564-6233 | han.kaythi@epa.gov

From: Han, Kaythi
Sent: Friday, July 26, 2019 4:47 PM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
Subject: For your review: AEZ Communication Materials

Hi Charlotte,

Ex. 5 Deliberative Process (DP)

Kaythi Han
Acting Communications Director
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(202) 564-6233 | han.kaythi@epa.gov

Message

From: Han, Kaythi [Han.Kaythi@epa.gov]
Sent: 7/31/2019 5:24:15 PM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]
CC: Altieri, Sonia [Altieri.Sonia@epa.gov]; Daguillard, Robert [Daguillard.Robert@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]; Malloy, Ruth [malloy.ruth@epa.gov]
Subject: FW: For your review: AEZ Communication Materials
Attachments: AEZ Communications Plan 7-26-19.docx; AEZ OPP Update 7-26-19.doc; AEZ QAs 7-26-19.docx; AEZ Tweets 7-24-19.docx

Hi Alex,

Attached for your review are the communication materials for the AEZ proposal.

Ruth, could you also add these attachments for Alex's binder? Thanks.

Kaythi Han
Acting Communications Director
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(202) 564-6233 | han.kaythi@epa.gov

From: Han, Kaythi
Sent: Friday, July 26, 2019 4:47 PM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
Subject: For your review: AEZ Communication Materials

Hi Charlotte,

Ex. 5 Deliberative Process (DP)

Kaythi Han
Acting Communications Director
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(202) 564-6233 | han.kaythi@epa.gov

Message

From: Keller, Kaitlin [keller.kaitlin@epa.gov]
Sent: 8/8/2019 8:00:54 PM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]
CC: Altieri, Sonia [Altieri.Sonia@epa.gov]; Daguillard, Robert [Daguillard.Robert@epa.gov]; Han, Kaythi [Han.Kaythi@epa.gov]
Subject: FW: For your review: AEZ Communication Materials
Attachments: AEZ Communications Plan 7-26-19.docx; AEZ QAs 7-26-19.docx; AEZ Tweets 7-24-19.docx; AEZ OPP Update 7-26-19 kk.doc

Ex. 5 Deliberative Process (DP)

From: Han, Kaythi <Han.Kaythi@epa.gov>
Sent: Wednesday, July 31, 2019 1:24 PM
To: Dunn, Alexandra <dunn.alexandra@epa.gov>
Cc: Altieri, Sonia <Altieri.Sonia@epa.gov>; Daguillard, Robert <Daguillard.Robert@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Malloy, Ruth <malloy.ruth@epa.gov>
Subject: FW: For your review: AEZ Communication Materials

Hi Alex,

Attached for your review are the communication materials for the AEZ proposal.

Ruth, could you also add these attachments for Alex's binder? Thanks.

Kaythi Han
Acting Communications Director
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(202) 564-6233 | han.kaythi@epa.gov

From: Han, Kaythi
Sent: Friday, July 26, 2019 4:47 PM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
Subject: For your review: AEZ Communication Materials

Hi Charlotte,

Ex. 5 Deliberative Process (DP)

Kaythi Han
Acting Communications Director
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(202) 564-6233 | han.kaythi@epa.gov

Message

From: Knott, Steven [Knott.Steven@epa.gov]
Sent: 8/8/2019 7:43:47 PM
To: Yarger, Ryne [Yarger.Ryne@epa.gov]
CC: Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Hughes, Hayley [hughes.hayley@epa.gov]; Schroeder, Carolyn [Schroeder.Carolyn@epa.gov]; Herndon, George [Herndon.George@epa.gov]
Subject: Re: Request for FIFRA SAP waiver of EPA's proposed rule, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)."
Attachments: 2018-07-20 Letter to FIFRA SAP.pdf; 2019-06-10 Letter to FIFRA SAP.pdf; A couple of questions.pdf; D=EPA-HQ-OPP-2017-0693-003.pdf; FIFRA Review Letter_AgWPS-AEZ NPRM_OPP to SAP_2019-07-31.pdf; FIFRA Review_AgWPS-AEZ_DraftNPRM_2019-07-10.pdf; Response from Chair 20190808.pdf; Waiver Request to OPP 20190808.pdf

Ryne,

Attached, please find the FIFRA SAP's decision regarding the subject, requested waiver. The FIFRA SAP Chair has non-concurred on this request. Please see the attached transmittal for further information.

Also attached are public comments associated with this matter. As noted previously, these comments were provided to the Chair as part of the review package.

Please let me know if you have any questions.

Thanks.

Steve

Via FedEx and E-mail

July 20, 2018

Clifford P. Weisel, Ph.D.
Environmental & Occupational Health Sciences Institute
Rutgers University
[redacted]

Re: *Imminent request to review draft rules to rollback crucial rules protecting farmworkers and their families from pesticides*

Dear Dr. Weisel:

We are writing to you in your role as a member of the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") Scientific Advisory Panel ("SAP"). As you know, the FIFRA SAP is charged with "comment[ing] as to the impact on health and the environment" of drafts of proposed FIFRA rules. 7 U.S.C. § 136w(d)(1). We understand that the U.S. Environmental Protection Agency (EPA) will soon transmit to the SAP for your review two draft rules that propose revisions to crucial protections provided by the Agricultural Worker Protection Standard ("WPS") and the Certification of Pesticide Applicators Rule ("CPA Rule") ("draft rules"). The WPS and CPA rules provide vital protections from exposure to toxic pesticides for hired farmworkers, pesticide applicators, their families and the general public in communities across the country, as well as for the environment. The WPS applies to hired workers and pesticide handlers who labor in farms, fields, nurseries, greenhouses, and forests. The CPA rule governs the training and certification requirements of workers who apply Restricted Use Pesticides ("RUPs") in a variety of settings, including homes, schools, hospitals, as well as agricultural and industrial establishments. By definition, Restricted Use Pesticides are those that EPA has determined can cause very significant harmful effects, often including death, if not handled properly. The use of RUPs is limited to individuals who are certified as competent to handle these dangerous products safely, or who work under the direct supervision of certified handlers. Under FIFRA, the FIFRA SAP may have as little as 30 days to review the draft rules and provide input to EPA[1]; **it is therefore imperative that you and other members of the SAP be prepared to act quickly**.

If adopted, we believe these draft rules would seriously undermine the health and safety of farmworker families, pesticide handlers, their children, and rural communities across the country and would increase the risks to non-target plants and wildlife, including endangered and threatened species. It is essential that the FIFRA SAP meaningfully review the draft rules and

[1] Under FIFRA, the SAP technically has 60 days for review. However, EPA is only obligated to respond to the comments and publish the comments and response in the Federal Register if the SAP provides comments to EPA within 30 days of receiving the draft rule. 7 U.S.C. § 136w(d)(1), referring to § 136w(b).

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provide the EPA with your best assessment of how the proposed changes could affect the health and well-being of farmworkers and their families, as well as the environment.

While FIFRA permits the SAP to waive its right to review draft pesticide regulations, **it is critical that the SAP not waive review of the draft rules**. The impacts on human health and the environment from changes to the WPS and CPA Rule must be well-understood and documented *before* EPA decides whether to finalize rules that would place farmworkers and pesticide handlers at risk of increased exposure to pesticides and make it harder for them to obtain information about the pesticides they are exposed to. If the FIFRA SAP waives review, EPA and the public will lose a key opportunity to obtain expert guidance on the potential health consequences of the draft rules.[2]

In particular, we ask that you: 1) conduct a full review of the draft proposed rules; 2) add this matter to the agenda of one of the SAP's public meetings; and 3) issue timely written findings on your conclusions.

Background

In late December 2017, EPA announced that it had started rulemakings to reconsider – and weaken – requirements in the WPS and the CPA Rule that were adopted during the Obama Administration. In particular, EPA announced that it plans to *repeal recently adopted safeguards* in the WPS that would:

- protect minors from having to work as pesticide handlers and/or protect them from being asked to enter recently treated fields sooner than EPA has determined would be safe to resume routine agricultural work activities;
- allow farmworkers to designate a representative to obtain important pesticide application and hazard information on their behalf, a right afforded workers in other sectors to protect their health and safety; and
- require that if a pesticide sprayer sees workers or other people around the application equipment, they should suspend the application until the unprotected person leaves the area.

EPA has also stated that it intends to weaken the recently adopted provisions in the CPA Rule that would require anyone handling RUPs and supervising handlers of RUPs to be at least 18 years old.

Why Analysis By the SAP Is Critical

As described below, EPA's draft rules appear to take a different view of how to protect farmworkers and their families from pesticides than EPA adopted less than 3 years ago when it

[2] We note that the EPA Science Advisory Board recently voted to review a series of controversial rules that EPA has proposed over the past eight months. They include a plan that would limit the types of scientific research that the EPA could use to justify environmental regulations, and proposals to strike down limits on greenhouse-gas emissions. Jeff Tollefson, Scientific American, *EPA Science Advisors Question "Secret Science" Rule on Data Transparency* (June 1, 2018), https://www.scientificamerican.com/article/epa-science-advisors-question-secret-science-rule-on-data-transparency/

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updated the WPS and CPA rules. A data-driven scientific analysis of whether the Obama Administration provisions are needed to avert harm, and whether the draft rules would undermine safety, is called for. The SAP brings special expertise in fields that are directly relevant to assessing the impacts of pesticide use on humans and the environment. It has long been the responsibility and practice of the SAP to advise EPA on the best ways to assess the impacts of proposed regulatory actions, such as these rulemakings, and, inform and advise the agency when it has not adequately evaluated the impacts on the sources and types of data that would improve such assessments.

Minimum Age. The current WPS requires that workers who mix, load, or apply any pesticide on an agricultural establishment, as well as workers who perform "early-entry" work in areas where pesticides were recently applied, must be at least 18 years old. Likewise, the CPA would require states to limit the use of the most toxic pesticides, those classified as "Restricted Use," only to people who are at least 18 years old. There are currently half a million children under the age of 18 working in agriculture, including some as young as elementary school age.[3]

EPA's primary rationale for the "minimum age" safeguards, which were adopted during the Obama Administration, was that as people grow older, their judgment and decision-making skills improve, and that more mature pesticide users are likely to make fewer mistakes that would pose a danger to themselves, to other people, and to the environment. EPA cited data about other activities, such as accident rates for sixteen-year-old drivers versus eighteen-year-olds, to support its position. An additional reason for establishing a requirement in the WPS and CPA rules that people be at least eighteen to use pesticides covered by the rules was to protect these users themselves, even when they use the pesticides correctly. As you know and as EPA's analyses have shown for hundreds of pesticides, the individuals who mix, load, and apply pesticides consistently receive much greater exposure to pesticides in terms of levels and frequency than do any other segment of the general population. Because the human nervous system continues to develop into young adulthood, EPA and public commenters argued that it would be wise to limit the potential for children to receive occupational exposure to pesticides. The agency set the minimum age at eighteen, thereby protecting children who are sixteen and seventeen years old and who are more vulnerable to effects on their nervous systems than older adults. Adopting a minimum age of eighteen for this work aligned the protections for children working in agriculture with the protections afforded to children workers in other industries. See Institute of Medicine and National Research Council. 1998. *Protecting Youth at Work: Health, Safety, and Development of Working Children and Adolescents in the United States*. Washington, DC: The National Academies Press. https://doi.org/10.17226/6019.

However, with EPA's new proposal to allow children younger than eighteen to handle pesticides, the Agency appears to have decided that the scientific and factual basis for setting a minimum age of eighteen is no longer valid. EPA's draft rules therefore appear to pose a scientific question that needs resolution: was EPA correct in 2015 when it concluded that allowing adolescents to handle pesticides would result in risks to the teens, bystanders, and the environment that could be mitigated with a minimum age requirement? We strongly urge the

[3] The minimum age requirement in both rules accounts for the needs of family-owned businesses and operators by exempting immediate family members of the owner-operator of agricultural establishments, and private or commercial pesticide applicator businesses.

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SAP to consider and report on whether allowing adolescents to handle and apply pesticides poses more risk to themselves and others and to the environment than if pesticide handling were limited to adults (including to review, and assess the overwhelming evidence that was analyzed on this question in 2015).

Designated representative. EPA's proposal to eliminate the designated representative provision of the WPS also raises scientific questions that should be resolved by the FIFRA SAP. The WPS provision is similar to a requirement established over three decades ago by the Occupational Safety and Health Administration (OSHA) for employees in all other types of industries with exposure to chemicals, including pesticides. Further, this requirement applies to farmworkers' requests for information for every other chemical to which they are exposed on an agricultural facility. When EPA adopted the designated representative provision 2.5 years ago, it identified many reasons why an agricultural worker may be unable to access information about the chemicals that they are exposed to, including but not limited to educational and language barriers as well as immigration status, illness or injury. EPA noted several examples of injured farmworkers who have been denied access to safety information after injury, and we are aware of many others. If this provision is repealed it is inevitable that some farmworkers will not get information about pesticides they have been exposed to, which are critical to those providing care and remedy for related symptoms and illness, and which they would have received if they could rely on a designated representative. The EPA, by proposing the repeal, must believe that limiting farmworkers' access to critical hazard information will not impact health and safety. This poses questions of fact and science that would benefit greatly from consideration and report-out by the FIFRA SAP: Does providing workers with better access to information about hazardous substances they are using and being exposed to lead to less exposure, injury and disease and better health care? What impact would elimination of the designated representative provision have on treating physicians' or health care providers' ability to properly diagnose and treat workers exposed to pesticides? Are there data and analyses available from the experience of workers in other industries subject to the OSHA rule that could inform the assessment of EPA's proposed change?

Application exclusion zone. The application exclusion zone requires the common-sense precaution that if someone is applying pesticides and sees workers or other people around the equipment, they should try to avoid spraying them by suspending the application and resuming only after all non-trained and unprotected persons leave the area.

While EPA regulations have long prohibited applicators from spraying unprotected people, the agency adopted the application exclusion zone because EPA's analysis of pesticide poisoning incidents showed that spraying workers who were in an area being treated with pesticides was one of the most common types of incidents. EPA noted that this additional requirement filled a crucial gap because the rules then in place did not provide meaningful guidance on how applicators can prevent human exposure during applications. This is especially important because EPA does not account for workers or bystanders being sprayed with pesticides when it conducts risk assessments to determine whether to register or re-register pesticides; rather, it assumes that these exposures do not happen. Eliminating the "suspend application" mandate, or limiting its scope, raises a scientific question: what impact would modifying this requirement have on the safety of the two and a half million farmworkers who labor in this country's fields

and orchards? Since the "suspend application" mandate has been in effect during the 2018 growing season, the SAP should consider whether EPA has adequately analyzed available incident reports to evaluate the impact of its proposal to remove the requirement. An analysis by the FIFRA SAP would be extremely useful to EPA and the public.

Cost-benefit. We also encourage the SAP to examine the EPA's analyses supporting the proposed changes to the WPS and CPA to see whether the agency has considered and appropriately used all available scientific information concerning the quantification of the benefits of the rule makings — such as studies on the problem of underreporting of pesticide incidents. The agency's failure to do so could result in an inaccurate assessment of the potential benefits of its proposals and lead to changes to the existing rules that would unjustifiably increase risks to human health and the environment.

Conclusion

With the lives of children and families across the country at stake, we write to strongly urge you to conduct an in-depth scientific review of the health and environmental impacts of the proposed weakening of these rules on farmworkers, especially farmworkers who are under the age of 18, their families, and rural communities. For all of these reasons, we ask that you: 1) conduct a full review of the draft proposed rule modifying the WPS and CPA rules; 2) add this matter to the agenda of one of the SAP's public meetings — either a meeting devoted exclusively to this matter or to the agenda of an upcoming meeting; and 3) issue written findings on your conclusions. We also urge you to allow remote participation in any public meeting of the SAP on these matters so that farmworkers and those providing direct medical, legal and social services to farmworkers can readily participate.

Thank you very much for your consideration.

Andrea Delgado
Legislative Director, Healthy Communities
Earthjustice

Virginia Ruiz
Director of Occupational and Environmental Health
Farmworker Justice

Mily Treviño Sauceda
Co-Director
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Paola Macas Betchart,
Workers Rights Advocate
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Via FedEx and E-mail

June 10, 2019

George B. Corcoran, Ph.D.
Department of Pharmacy & Health Science
Wayne State University
[redacted]

Re: *Imminent request to review draft regulation to roll back crucial protections from pesticides for farmworkers and their families*

Dear Dr. Corcoran:

We are writing to you in your role as a member of the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") Scientific Advisory Panel ("SAP"). As you know, the FIFRA SAP is charged with "comment[ing] as to the impact on health and the environment" of drafts of proposed FIFRA rules.[1] You will soon be asked to review and comment on the impact of a draft rule rolling back the Application Exclusion Zones ("AEZ"), a provision of the Agricultural Worker Protection Standard ("WPS") that reduces the risk of continued exposures to workers and bystanders during pesticide applications. Exposure to drift during pesticide applications is a serious and common public health problem in agricultural communities. Many attempts to address the issue in the past have failed, at great cost to the short- and long-term health of farmworkers and communities that live, learn, work, play, and pray in areas adjacent to agricultural establishments where pesticides are sprayed. Weakening the AEZ could threaten the health and safety of tens of thousands of people around the country. We therefore respectfully request that the FIFRA SAP meaningfully review the draft AEZ rollback and provide the U.S. Environmental Protection Agency ("EPA") with your best assessment of how the proposed change could affect the health and well-being of farmworkers, their families and the communities surrounding agricultural establishments where pesticides are sprayed.[2]

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[1] 7 U.S.C. § 136w(d)(1).

[2] Some of us wrote to you in July 2018 because we thought that EPA would soon transmit to the SAP two draft rules that would have proposed revisions to crucial protections provided by the WPS, a regulation that provides vital protections from exposure to toxic pesticides for hired farmworkers, their families, and the general public in communities across the country, as well as for the environment. However, as you know, EPA never sent those draft rules to the SAP. Rather, Congress took up the matter, and earlier this year, it adopted the Pesticide Registration Improvement Extension Act of 2018 ("PRIA 4"), which *prohibits EPA from enacting two of the three proposed rollbacks* prior to October 1, 2021. Pesticide Registration Improvement Extension Act of 2018 Pub. L. No. 116-8, 133 Stat. 484 (Mar. 8, 2019), https://www.congress.gov/bill/116th-congress/senate-bill/483/text#toc-H8C99345290024FF3833B69749749D237. However, PRIA 4 does not prohibit EPA from seeking to roll back the AEZ.

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Under FIFRA, the FIFRA SAP may have as little as 30 days to review the draft rule and provide input to EPA[3]; **it is therefore imperative that you and other members of the SAP be prepared to act quickly**. While FIFRA permits the SAP to waive its right to review draft pesticide regulations, **it is critical that the SAP not waive review of the draft rule**. If the FIFRA SAP waives review, EPA and the public will lose a key opportunity to obtain expert guidance on the potential health consequences of the draft rule.[4]

In particular, we ask that you: 1) conduct a full review of the draft proposed rule; 2) add this matter to the agenda of one of the SAP's public meetings; and 3) issue written findings on your conclusions before your review period elapses.

What is the AEZ?

In 2015, EPA updated the WPS to provide far stronger protections against pesticide exposure for farmworkers, their families, and rural communities. One of the key provisions established the concept of "Application Exclusion Zones" to reduce the risk of continued exposures to workers and bystanders during pesticide applications. An AEZ is a relatively small (25-100-foot) area around the pesticide application equipment where no one is permitted to be when a pesticide is being sprayed. If a pesticide applicator sees a person or group of people not involved in assisting with the pesticide application within this zone, he or she must suspend the application immediately and resume after the person[s] leaves the area. The AEZ provisions establish clear guidelines for applicators to prevent immediate harm. EPA's own analysis found that the AEZ requirement would reduce a significant portion of poisoning incidents while imposing only negligible costs on employers.[5]

Why Analysis by the SAP Is Critical

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[3] Under FIFRA, the SAP technically has 60 days for review. However, EPA is only obligated to respond to the comments and publish the comments and response in the Federal Register if the SAP provides comments to EPA within 30 days of receiving the draft rule. 7 U.S.C. § 136w(d)(1), referring to § 136w(a)(2)(A).

[4] We note that the EPA Science Advisory Board voted to review a series of controversial rules that EPA has recently proposed, including a plan that would limit the types of scientific research that EPA could use to justify environmental regulations, and proposals to strike down limits on greenhouse-gas emissions. *See* Sean Reilly, *Advisory Panel to Review "Secret Science" Plan*, E&E News (June 6, 2019), https://www.eenews.net/eenewspm/2019/06/06/stories/1060501795; Rebecca Beitsch, *The Battle Over Science Roils EPA*, The Hill (June 9, 2019), https://thehill.com/policy/energy-environment/447520-battle-over-science-roils-epa.

[5] *Pesticides; Agricultural Worker Protection Standard Revisions*, 80 Fed. Reg. 67,496, 67,524-5 (Nov. 2, 2015); Regulations.gov, *Economic Analysis of Agricultural Worker Protection Standard Revisions, September 2015 IN 2070-AJ22* at 88-89 (Sept. 2015), https://www.regulations.gov/document?D=EPA-HQ-OPP-2011-0184-2522 (follow "view document" hyperlink).

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When adopting the AEZ in 2015, EPA's analysis showed that incidental spraying of workers who were in an area being treated with pesticides was one of the most common types of incidents resulting in pesticide exposure. Federal and state health agencies, worker advocacy organizations, and even the news media have reported hundreds of injuries each year resulting from careless pesticide applications and drift surrounding applications and equipment. EPA noted that requiring an AEZ filled a crucial gap because the rules then in place did not provide meaningful guidance on how applicators can prevent human exposure during applications. This is especially important because EPA does not account for workers or other bystanders being sprayed with pesticides when it conducts risk assessments to determine whether to register or re-register pesticides; rather, it assumes that these exposures do not happen.

By proposing to roll back the current AEZ protections, the Trump EPA has let it be known that it will take a different approach. To determine whether EPA's new approach provides sufficient protection against the risk of toxic exposure resulting from unintentional spraying in a pesticide treatment area, a data-driven scientific analysis of whether the AEZ is needed to avert harm is called for. The SAP brings special expertise in fields that are directly relevant to assessing the impacts of pesticide use and exposure on humans and the environment. It has long been the responsibility and practice of the SAP to advise EPA on the best ways to assess the impacts of proposed regulatory actions, such as this rulemaking, and to inform and advise the Agency when it has not adequately evaluated the impacts on the sources and types of data that would improve such assessments.

Eliminating the AEZ "suspend application" mandate, or limiting its scope, raises a scientific question: what impact would modifying this requirement have on the safety of the two and a half million farmworkers who labor in this country's fields and orchards, as well as communities surrounding these agricultural communities? The SAP should consider new information about pesticide spray drift. This new information includes a recent study measuring drift and assessing how best to protect workers from exposure. *See* Edward J. Kasner et al., *Spray Drift from a Conventional Axial Fan Airblast Sprayer in a Modern Orchard Work Environment*, 62 Annals of Work Exposures and Health (2018), attached hereto as Exhibit A.

In addition, we are aware that the California Department of Pesticide Regulation ("DPR") maintains an extensive searchable database of pesticide-related illness. *See* California Department of Pesticide Regulation, *California Pesticide Illness Query (CalPIQ)*, https://apps.cdpr.ca.gov/calpiq/ (last visited June 6, 2019). An analysis of reported spray drift incidents in that data base could provide valuable insights into what regulatory protections might have averted these incidents. For example, case numbers 1663-1743 from the DPR database involve 65 workers who were sickened by pesticide drift from two tractor airblasts and one aerial application of sulfur to a nearby field. The closest workers were only 30-50 feet from one of the tractor applications. Case numbers 1625-1646 from the DPR database involved fieldworkers who arrived at a vineyard to harvest grapes while pesticides were being applied to an adjacent field. The workers, 24 of whom became ill, were not informed of the ongoing application. Likewise, important information could be gleaned from careful review of a recent pesticide spray drift incident in Watsonville, California, which is too recent to be entered into the database, in which 24 employees were sickened after being contaminated with pesticides that drifted from an adjacent field. *See* Notice of Proposed Action from County of Santa Cruz Office of the

Agricultural Commissioner to Los Amigos Harvesting (June 1, 2018) (File No. 44171803) attached hereto as Exhibit B; Notice of Proposed Action from County of Santa Cruz Office of the Agricultural Commissioner to FMG Farm Contractor, Inc. (June 1, 2018) (File No. 44171804) attached hereto as Exhibit C; Department of Pesticide Regulation Enforcement Branch, *State of California Pesticide Episode Investigation Report* (June 29, 2017) attached hereto as Exhibit D.[6] These incidents could provide important information about standards needed to prevent such incidents in the future. If the SAP concludes, after considering new information about pesticide spray drift, that the AEZ should be strengthened, it would be consistent with the SAP's mandate to share that information with EPA and the public.

While these incidents provide important insights that bear further analysis, it is important to be aware that, unlike California, many states, including many agricultural states, do not have a comprehensive searchable database of pesticide health-related illness incidents, and specific agriculture related pesticide exposure incidents are not always so identified or characterized. Moreover, to the extent any state maintains such a database, it only contains information on incidents of pesticide exposure that are reported. However, such incidents are vastly under-reported, for multiple reasons, not the least of which are: 1) the fear of retaliation that most farmworkers and rural communities have should they report such incidents; and 2) the lack of training and knowledge by health care providers of the signs and symptoms and the reporting requirements of pesticide-related illness. See Geoffrey M. Calvert et al., *Acute Pesticide Poisoning Among Agricultural Workers in the United States, 1998 – 2005*, 51 Am. Journal of Indus. Med. 883, 894-95 (2008) (discussing reasons why agricultural workers are deterred from seeking health care and why health care professionals misdiagnose acute pesticide poisonings).

We also encourage the SAP to examine EPA's analyses supporting the proposed changes to the AEZ to see whether the Agency has considered and appropriately used all available scientific information concerning the quantification of the benefits of the rulemaking — such as studies on the problem of underreporting of pesticide incidents. Pesticide exposure and pesticide-related illness is a public health issue with economic and social consequences that are not always quantified, but which do have an impact, not only on individuals and families, but on communities, locales and even state resources. The Agency's failure to conduct such an analysis could result in an inaccurate assessment of the potential benefits of its proposals and lead to changes to the existing rule that would unjustifiably increase risks to human health and the environment.

Conclusion

With the lives of children and families across the country at stake, we write to strongly urge you to conduct an in-depth scientific review of the health and environmental impacts on farmworkers, their families, and rural communities resulting from the proposed weakening of the WPS. In particular, we ask that you: 1) conduct a full review of the draft proposed rule modifying the WPS to eliminate the AEZ; 2) add this matter to the agenda of one of the SAP's

[6] For more about this incident, please *see* Ted Goldberg, *Workers in Central Coast Pesticide Drift Tied to Dole, Driscoll's Were Sick for Days*, KQED News (July 5, 2018), https://www.kqed.org/news/11678534/workers-in-central-coast-pesticide-drift-tied-to-dole-driscolls-were-sick-for-days.

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public meetings — either a meeting devoted exclusively to this matter or to the agenda of an upcoming meeting; 3) solicit input directly from farmworkers on the effectiveness of the AEZ; and 4) issue written findings on your conclusions. We also urge you to allow remote participation in any public meeting of the SAP on these matters and to notify stakeholder communities so that farmworkers and those providing direct medical, legal, and social services to farmworkers can readily participate.

Thank you very much for your consideration.

Eve C. Gartner and Carrie Apfel
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Jeannie Economos
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Exhibit A

Annals of Work Exposures and Health, 2018, Vol. 62, No. 9, 1134–1146
doi: 10.1093/annweh/wxy082
Advance Access publication 19 October 2018
Original Article

Original Article

Spray Drift from a Conventional Axial Fan Airblast Sprayer in a Modern Orchard Work Environment

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Submitted 7 February 2018; revised 13 August 2018; editorial decision 21 August 2018; revised version accepted 4 September 2018.

Abstract

Pesticide spray drift represents an important cause of crop damage and farmworker illness, especially among orchard workers. We drew upon exposure characteristics from known human illness cases to design a series of six spray trials that measured drift from a conventional axial fan airblast sprayer operating in a modern orchard work environment. Polyester line drift samples ($n = 270$; 45 per trial) were suspended on 15 vertical masts downwind of foliar applications of zinc, molybdenum, and copper micronutrient tracers. Samples were analyzed using inductively coupled plasma mass spectrometry and resulting masses were normalized by sprayer tank mix concentration to create tracer-based drift volume levels. Mixed-effects modeling described these levels in the context of spatial variability and buffers designed to protect workers from drift exposure. Field-based measurements showed evidence of drift up to 52 m downwind, which is approximately 1.7 times greater than the 30 m (100 ft) 'Application Exclusion Zone' defined for airblast sprayers by the United States Environmental Protection Agency Worker Protection Standard. When stratified by near (5 m), mid (26 m), and far (52 m) distances, geometric means and standard deviations for drift levels were 257 (1.8), 52 (2.0), and 20 (2.3) µl, respectively. Fixed effect model coefficients showed that higher wind speed [0.53; 95% confidence interval (CI): 0.35, 0.70] and sampling height (0.16; 95% CI: 0.11, 0.20) were positively associated with drift; increasing downwind distance (–0.05; 95% CI: –0.06, –0.04) was negatively associated with drift. Random effects showed large within-location variability, but relatively few systematic changes for individual locations across spray trials after accounting for wind speed, height, and distance. Our study findings demonstrate that buffers may offer drift exposure protection to orchard workers from airblast spraying. Variables such as orchard architecture, sampling height, and wind speed should be included in the evaluation and mitigation of risks from drift exposure. Data from our study may prove useful for estimating potential exposure and validating orchard-based bystander exposure models.

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Keywords: airblast sprayer; application exclusion zone; drift; exposure assessment—mixed models; orchard; passive sampling; pesticide exposure; pesticide spraying

Introduction

Spray drift is described as the off-target movement of droplets, irrespective of active ingredient, during or shortly after the time of pesticide application (Drewes et al., 1990; USEPA, 1990; Miller, 2014). Spray drift—hereafter referred to as 'drift' and distinct from movement by volatilization or windborne dust particles—represents an important cause of crop damage and farmworker illness resulting from agricultural applications (Felsot et al., 2010; Lee et al., 2011). It is a public health concern in the Pacific Northwest, especially among orchard workers (WADOH, 2013; WADOH, 2017). We drew upon exposure characteristics from known human illness cases to design a series of spray trials that measured drift from a conventional axial fan airblast (AFA) sprayer operating in a modern orchard. Our trials placed a grid of field targets in an orchard work environment during a simulated drift event, an incident when one or more humans are exposed to pesticide drift (Lee et al., 2011).

Method of application, droplet size, and meteorological conditions are key factors that influence drift (Murray and Vaughan, 1970; Thistle, 2004; Felsot et al., 2010; USEPA, 2016a). The AFA sprayer has been a standard tool for tree fruit pesticide application since its rapid and wide scale adoption in the 1950s (Fox et al., 2008; Matthews et al., 2014a). Over time, orchard management practices have greatly reduced tree height and canopy volume. As a result, conventional AFA output no longer matches modern canopies and thereby increases drift potential (Landers, 2011; Cross et al., 2013). Spraying finer droplets promotes good crop coverage, but it competes with the need for coarser droplets that reduce drift potential (ASABE, 2013). At a release height of 3 m, coarse droplets typically settle out within seconds due to gravitational force (deposition drift), whereas fine droplets can remain suspended for minutes or hours and be carried greater distances by the wind (airborne drift) (Matthews et al., 2014b; Miller, 2014). The deposition fraction of drift can be collected on horizontal surfaces by gravitational settling and the airborne fraction can be collected on vertical surfaces by interception or impaction (Hinds, 1999). Meteorological conditions modify the effect of droplet size and release height on drift potential. Higher wind speeds result in more drift at greater distances (Nuyttens et al., 2005). Larger fluctuations in wind direction increase the unpredictability of droplet travel direction and the amount of dilution due to atmospheric turbulence (Thistle, 2004).

Regulatory agencies attempt to protect pollinators, sensitive crops, bodies of water, and humans by mitigating drift using the above factors. Some pesticide labels specify acceptable wind speeds or buffer zones during application (USEPA, 2001; LERAP, 2002; De Schampheleire et al., 2007; EFSA, 2014). In the UK, aquatic buffer requirements vary by sprayer type, applied dose, and the presence of windbreaks (LERAP, 2002). In the USA, the federal Worker Protection Standard (WPS) includes an 'Application Exclusion Zone' (AEZ), a buffer that moves with active application equipment that 'must be free of all persons other than appropriately trained and equipped handlers' (USEPA, 2016b). An AEZ of 30 meters (m) or 100 feet (ft) is required for aerial, airblast, fumigant, smoke, mist, and fog applications and also for any other application methods that produce droplets having a volume median diameter less than 294 microns (USEPA, 2016b).

A growing body of research about sampling techniques (Donkersely and Nuyttens, 2011), spray mass balance (Jensen and Olesen, 2014), and experimental spray trials (Holterman et al., 2017) indicates sustained interest in characterizing orchard drift. Foliar application of elements (i.e. micronutrients) has long been recognized as a means for crop nutrition (Boynton, 1954; WSU, 2017a). Conveniently, experimental trials can be designed to apply multiple metal salt solutions to a single field sample, recovered through acid extraction, and then analyzed in a sensitive inductively coupled plasma mass spectrometry (ICP-MS) procedure (Foqué et al., 2014). For example, micronutrient tracers have been used in previous orchard-based drift field studies (Travis et al., 1985; Murray et al., 2000). Databases of such field studies are being developed to model orchard drift (Bonds et al., 2016; Holterman et al., 2017), including bystander exposure (Cunha et al., 2012; Van de Zande et al., 2014; Kennedy and Butler Ellis, 2017). Two models—the Bystander and Resident Exposure Assessment Model (BREAM) and Bystanders, Residents, Operators, and WorkerS Exposure (BROWSE)—were created to improve regulatory drift exposure and risk assessment in the European Union (Butler Ellis et al., 2010; Butler Ellis et al., 2017a,b). BROWSE model developers have called for more orchard-based experiments to support a wider range of drift distances, better describe the relationship

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between airborne spray and bystander exposure, and provide data for model validation (Butler Ellis et al., 2017a).

Volunteers and mannequins have been used in drift studies to estimate potential dermal exposure by measuring deposits on coveralls (Butler Ellis et al., 2010; Butler Ellis et al., 2014). Such studies have addressed crucial components of human exposure, including collection efficiency (Butler Ellis et al., 2018). Yet, spatiotemporal aspects of orchard work environments known to result in drift-related illnesses have not been evaluated. For example, Calvert et al. (2015) describe a scenario in which an airblast application to pear trees drifted on 20 workers who were tying branches of cherry trees at distances from 9 to >107 m (30 to >350 ft) away. Orchard drift sampling usually occurs in flat areas downwind of one or a few sprayer passes, but no studies have simulated longer spray periods with sampling in downwind tree canopies more representative of orchard worker exposure scenarios.

The purpose of this study was to characterize the magnitude and spatial variability of drift levels in an orchard work environment during longer spray periods. Our secondary goals were: (i) to evaluate drift in the context of buffers designed to prevent bystander exposure and (ii) to develop methods for comparing the drift potential of different application technologies in future studies.

Methods

Figure 1 provides an overview of our methods. Briefly, three micronutrient tracers—zinc (Zn), molybdenum (Mo), and copper (Cu)—were applied by an AFA sprayer to the same 0.4 hectare (1 acre) orchard block of trees at full canopy on 6 days: 1–2 July 2015; 10 June, 2016; and 28–30 September 2016. Each spray trial, which consisted of one tracer application to the block on a single day, involved the downwind collection of drift samples on two different matrices suspended from 6 m vertical masts. Samples were analyzed for metals in a laboratory and then used to build a mixed-effects model.

All field studies took place at a Washington State University (WSU) research orchard situated in a river valley that oriented the wind prevailingly from the north (Supplementary Figure S1 in the Supplementary Material, available at *Annals of Work Exposures and Health* online). Three varieties of apple trees were planted in rows along a north–south axis, trained to trellises, and had columnar-shaped canopies that reached approximately 3.5 m (11.5 ft) tall (Supplementary Figures S2–S3 in the Supplementary Material, available at *Annals of Work Exposures and Health* online). The study site was bordered by open flat land to the north, other orchard blocks to the east and south, and a small private service road with no traffic to the west.

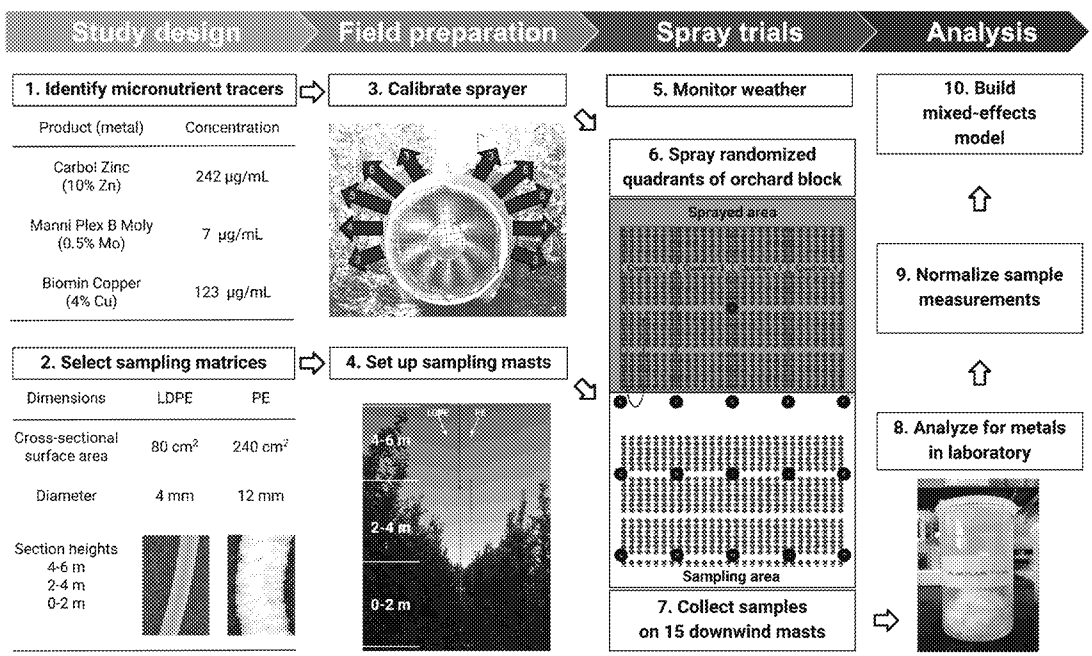

Figure 1. Overview of methods used in study. Drift levels were measured with passive sampling matrices consisting of low-density polyethylene (LDPE) and polyester (PE) lines.

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Study design

Micronutrient tracers

Our trials utilized the efficiency of applying multiple metal salt solutions to a single target by adapting micronutrient tracer field sampling methods described by Cross et al. (2001a) and ICP-MS lab methods described by Zabkiewicz et al. (2008). Before each trial, the sprayer tank was flushed with cleaner (sodium tripolyphosphate and sodium carbonate) and then triple-rinsed. The certified applicator mixed, loaded, and applied label-recommended concentrations for one of three water soluble micronutrient product mixes: *Carbol™ Zinc* (10% Zn; 2.5 ml/l; 32 oz/100 gal), *Manni-Plex® B Moly* (0.5% Mo; 1.3 ml/l; 16 oz/100 gal), and *Biomin® Copper* (4% Cu; 2.5 ml/l; 32 oz/100 gal). The sprayer tank was allowed to mechanically agitate for at least 5 minutes (min) until the solution was thoroughly mixed. Bulk tank mix and water source samples were collected in 180 ml (6 oz) polyethylene containers before spraying began.

Sampling matrices

Two different matrices were deployed to compare their relative drift sampling strengths: low-density polyethylene (LDPE) line for its uniform surface area and polyester (PE) line for having a high collection efficiency similar to pipe cleaners (Gilbert and Bell, 1988; Miller et al., 1989; Davis et al., 1993; Miller, 2014). The LDPE line was tubing with an outer diameter of 4 mm (0.16 in) (*Dynalon*; Rochester, NY; product #1248). The PE line was PE pile with wireless cotton core and a diameter of 12 mm (0.47 in) (*Hewitt and Booth*; Huddersfield, UK). We used pairwise scatter plots to investigate whether PE lines captured higher drift levels than LDPE lines after adjusting for cross sectional area.

Field preparation

Sprayer calibration

An AFA sprayer (*Rears Pak-Blast-100*) was calibrated to apply a liquid volume of 935 l/ha (100 gal/ac), which is commonly listed on pesticide labels as a volume per area goal for tree fruit applications. Expected volume output was calculated using parameters for orchard row width (3 m; 10 ft); tree spacing (0.9 m; 3 ft); tractor speed (1.3 m/s; 3.0 mph); boom type (curved); system operating pressure (14 bar; 205 psi); and nozzle type (steel, hollow cone, *TeeJet*), number (10), size (two D3, two D4, four D5, all with 25 cores), and arrangement (Hoheisel, 2016; Turbo-Mist, 2017). The field team calibrated tractor speed and sprayer system pressure, inserted new stainless steel nozzles, adjusted sprayer airflow direction into the tree canopy, and compared expected versus observed nozzle volumetric flow rates to ensure accurate nozzle output (Hoheisel, 2016). Nozzle and pressure settings were used to find theoretical droplet sizes, which were 110–125 μm and fit into the 'fine' droplet classification category (ASABE, 2013; TeeJet, 2014). The sprayer was outfitted with a global positioning system to verify the sprayer route and spray start and stop times to the nearest minute for each quadrant.

Sampling masts

Fifteen 6 m (20 ft) vertical target masts were set up between tree rows in a sampling area that was downwind of the area to be sprayed. Each mast had collocated LDPE and PE line matrices suspended in a vertical plane with crossbars at 2, 4, and 6 m (Supplementary Figure S4 in the Supplementary Material, available at *Annals of Work Exposures and Health* online).

Spray trials

Weather conditions

Local meteorological measurements followed applicable protocols from the American Society of Agricultural and Biological Engineers (ASABE) and the International Organization for Standardization (ISO) (ASABE, 2004; ISO, 2005). Wind speed, wind direction, air temperature, and relative humidity were recorded at two locations on opposite sides of the study site.

A permanent on-site station (WSU AgWeatherNet) was located approximately 70 m (230 ft) west of the nearest corner of the sprayed block with instruments that were approximately 2 m (about 6 ft) above the ground. Data were collected with a 0.2 Hz sampling frequency by a data logger (*Campbell Scientific CR-1000;* Logan, UT), processed as 15-min averages, and downloaded from an online portal (Pierce and Elliott, 2008; WSU, 2015). The wind speed sensor (*Met One Model 014A;* Grants Pass, OR) was a three-cup anemometer. The wind direction sensor (*Met One Model 024A;* Grants Pass, OR) was a wind vane that reported one of eight categories [four cardinal (N-E-S-W) and four ordinal (NE-SE-SW-NW)]. Temperature and relative humidity (*Campbell Scientific Rotronic HC2S3 Model 107;* Logan, UT) data were also available (WSU, 2015; WSU, 2017b).

A second, temporary station was placed approximately 190 m (623 ft) northeast of the nearest corner of the sprayed block. Data were collected with a 0.1 Hz sampling frequency by a data logger (*Campbell Scientific CR-1000*; Logan, UT), processed as 1-min averages, and downloaded to a laptop. Measurements were taken at two different heights. At 3 m (10 ft), there was a three-cup anemometer with a wind vane (*Met One Model 034B;* Grants Pass, OR) and temperature probe (*Campbell Scientific Model 109;* Logan, UT). At

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10 m (33 ft), there was a three-axis ultrasonic anemometer (*RM Young Model 81000V*; Traverse City, MI) and a temperature and relative humidity probe (*Campbell Scientific Model HMP45C-L*; Logan, UT). The temporary meteorological station measured wind direction in azimuth degrees.

Only spray trials that met ISO meteorological data quality standards for drift sampling were included: samples were replicated at least three times in similar wind conditions, wind speeds were at least 1.0 m/s (2.2 mph), mean wind direction was at 90° ± 30° to the downwind edge of the sprayed area (i.e. wind rose direction ≥ 330° or ≤ 30°), and temperatures were 5–35°C (41–95°F) (ISO, 2005).

Randomized quadrant spraying

Application start timing decisions were based on the most recent 15-min average meteorological measurements for wind speed, wind direction, and temperature. A block of 28 tree rows was divided into four quadrants of approximately seven rows each (Fig. 2). Quadrant spray order was randomized to mitigate the effect of changing environmental conditions across spray trials. A certified applicator sprayed each row in serpentine fashion with nozzles open on both sides of the sprayer as it traveled between every row. Nozzles were turned off during turns. The outward facing half of outside rows was not sprayed.

Sample collection

We followed applicable ISO drift sampling guidelines by establishing a coordinate reference system with an array of samples, measuring all distances from the downwind edge of the sprayed area, and setting up vertical target masts for air-assisted orchard sprayers (ISO, 2005). Drift samples were taken in an adjacent orchard block at different distances and heights relevant to farmworker activities (e.g. harvesting, pruning, or thinning on the ground or a ladder). Three rows of five vertical masts were arranged 5 m (16 ft, Masts B-F), 26 m (85 ft, Masts G-K), and 52 m (171 ft, Masts L-P) downwind of the sprayed block (Fig. 2). Reference samples were also collected in the middle of the sprayed block (Mast A) and 200 m (656 ft) upwind (Mast Q). To understand the vertical drift profile for each spray trial, continuous lines were cut into discrete sections (2 m; 7 ft) and stored in separate collection bottles at ambient temperature (ISO, 2005).

Analysis

Laboratory metals analysis

Samples were submitted to the DEOHS Environmental Health Laboratory (EHL) in Seattle and analyzed for micronutrient tracer mass. Aliquots of the sprayer bulk tank and water source samples were prepared using microwave assisted digestion (open vessel, ramp to 90°C in 10 min and hold for 20 min) and then diluted with deionized water to final concentration of 10% HNO_3, 6% HCl, and 10 ppb terbium (Tb) recovery standard. Bulk samples were digested because of precipitation and apparent microbial growth in some sample containers. To all other samples, 10% HNO_3 with 10 ppb Tb was added. The extraction and digestion solutions were analyzed by ICP-MS based on Method 6020a Rev.1 2007 from United States Environmental Protection Agency (USEPA) (USEPA, 1998). A minimum of three matrix blanks were analyzed with each batch of samples to quantify and correct for mean blank background metal levels.

Samples with resulting negative values were considered below the limit of blank (LOB), or the concentration found when replicates of a blank sample containing no analyte were tested (Armbruster and Pry, 2008). The limit of quantitation (LOQ) was determined by multiplying the standard deviation (SD) of the matrix blanks by 3. We explored both substitution (e.g. $\frac{LOQ}{\sqrt{2}}$) and imputation techniques for samples below the LOQ, but any gains made by these methods did not compare to using the log-normally (ln) distributed raw lab values themselves (Succop et al., 2004). As such, we included sample measurements that were below LOQ but above LOB. Measurements below LOB ($n = 4$) were excluded.

Sample measurement normalization

Laboratory values were normalized by dividing the mass per sample (M_{sample} in µg per 2 m section of PE line) by the concentration of the tracer in the tank mix (C_{tank} in µg/ml) (Cross et al., 2001b). This allowed comparison of corresponding normalized values (in µl) for different spray trials in a way that eliminated micronutrient effects, which we defined as differences in concentration due to label mixing instructions or sampling variability. Normalized results were reported as drift levels, or volume tank equivalents (V_{drift}) deposited on each sample, giving a convenient interpretation shown by the following worked example:

$$V_{drift} = \frac{M_{sample}}{C_{tank}} = \frac{0.871\mu g}{11.4\frac{\mu g}{ml}} = 0.0764\,ml = 76.4\mu l$$

Mixed-effects model

Data were managed and analyzed with R v.3.3.3 (R Core Team, 2017) using the following packages:

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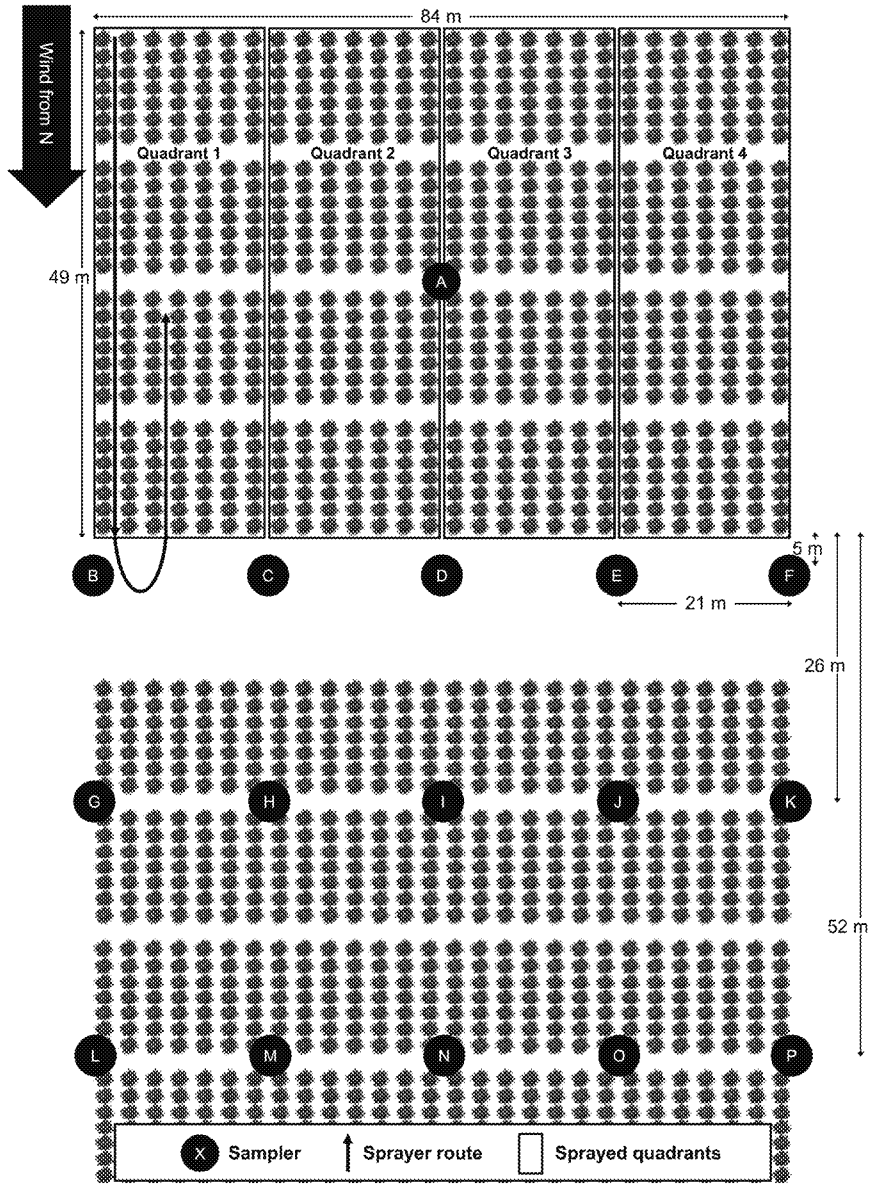

Figure 2. Relative locations of sprayed and sampling blocks with prevailing wind from the north. Sprayed block was divided into four quadrants and sprayed in a randomized order by the axial fan airblast sprayer. Drift sample locations were Masts B-P organized in a grid downwind of the sprayed block. Reference sample locations were Mast A (middle of the sprayed area) and Mast Q (not pictured; 200 m upwind).

ggplot2, knitr, lme4, lubridate, reshape, and rstudio (Wickham, 2007; Wickham, 2009; Grolemund and Wickham, 2011; RStudio Team, 2012; Bates et al., 2015; Xie, 2017). We produced tables of arithmetic and geometric means (AM; GM) and standard deviations (ASD; GSD), scatter plots, box plots, and heat maps.

Linear mixed-effects modeling fit by restricted maximum likelihood was used to assess the significance of downwind distance, height, and wind speed in explaining variations of drift level (ln-µl) by location, as measured on PE line [n = 270 (samples), k = 15 (locations), l = 6 (spray trials)]. The model was generated using the lmer function in the R package lme4, with continuous measures of distance, height, and wind speed as fixed effects and categorical location as a random effect. To estimate their impact on within- and between-location

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variance components, we reran the model without fixed effects. We assumed a ln distribution for drift level and a normal distribution for all other parameters. Model significance was reported at the $\alpha = 0.05$ level.

Results

Weather conditions

Overall meteorological conditions were relatively similar across spray trials and measurement intervals (Table 1). Spraying typically occurred between 8:00 AM and approximately noon. The duration was longer in September 2016 because three sprayers were used each day compared to only two in July 2015 and June 2016. Results for 1-min averages were not available from 1–2 July 2015 due to a malfunctioning data logger.

Average wind speeds at 2 m elevation were within USEPA's drift-reducing wind recommendations of 3–10 mph (USEPA, 2001). The 15-min wind speed measurements taken 70 m west of the sprayed block at a height of 2 m ranged from 2.9 to 4.0 m/s (6.4–8.9 mph); 1-min measurements taken 190 m northeast at a height of 10 m ranged from 3.4 to 4.7 m/s (7.6–10.5 mph). As expected, wind direction was almost exclusively from a northerly direction. The 2 m station always averaged ±20° from true north. The 10 m station once averaged −48° (northwest) on 10 June 2016, but otherwise no more than approximately ±20° from true north (Supplementary Figure S5 in the Supplementary Material, available at *Annals of Work Exposures and Health* online).

Temperatures in July 2015 were 10–15°C higher than spray days in early summer or fall, but still within the acceptable range of temperatures for drift sampling. Inclusion of temperature, humidity, and 1-min (instead of 15-min) wind data as fixed effects in secondary models did not impact study findings.

Sample collection

Samples (n = 459) were collected over six spray days (Supplementary Table S1 in the Supplementary Material, available at *Annals of Work Exposures and Health* online). During each of the first three spray days, 102 line samples (3 PE and 3 LDPE from 17 masts) were collected. Only PE samples (n = 51) were collected during the last three spray days. After demonstrating that the cross sectional area adjusted deposits from 1 July 2015 were highly correlated (Fig. 3, $R^2 = 0.81$), LDPE samples collected on 2 July 2015 and 10 June 2016 were not analyzed and LDPE samples were not collected on 28–30 September 2016. The intercept in Fig. 3 demonstrates that PE line collected 0.072 µl/cm² more than LDPE line, on average. Over the entire study, a total of 306 PE samples (51 from each of the six spray days) were collected and analyzed. There were 270 drift samples (Masts B-P) and 36 reference samples (Masts A and Q).

Laboratory metals analysis

Reporting limits for Zn, Mo, and Cu sampling with LDPE (LOB: 0.1, 0.001, 0.01 µg; LOQ: 0.2, 0.005, 0.04 µg) and PE (LOB: 3, 0.03, 0.7 µg; LOQ: 8, 0.08, and 2 µg) were low enough to avoid substantial data censoring (Supplementary Table S2 in the Supplementary Material, available at *Annals of Work Exposures and Health* online). With the exception of four PE Zn measurements from 52 m downwind, all drift samples were above LOB and therefore included in the statistical analysis. LDPE spike recovery efficiencies for Zn, Mo, and Cu from the July 2015 sample analysis batch were 91, 87, and 90%. PE spike recovery efficiencies for Zn, Mo, and Cu from

Table 1. Summary of meteorological data collected during each spray day.

Spray day	Time	Duration[a] (min)	Temp[b] (°C)	Wind speed (m/s)[c] AM (ASD)	Wind direction (°)[c] AM (ASD)
1 July 2015	10:41–12:13	92	32.4	3.3 (0.3); - -	360 (0.0); - -
2 July 2015	10:15–11:21	66	31.6	4.0 (0.3); - -	360 (0.0); - -
10 June 2016	10:44–12:08	84	19.3	3.7 (1.5); 4.7 (2.0)	340 (0.6); 312 (0.5)
28 September 2016	09:34–11:35	121	18.9	4.0 (0.2); 4.4 (1.1)	360 (0.0); 338 (0.2)
29 September 2016	08:50–10:42	112	16.0	2.9 (0.2); 3.4 (0.9)	12 (0.4); 343 (0.2)
30 September 2016	08:20–10:07	107	15.5	3.2 (0.2); 3.7 (1.0)	360 (0.0); 340 (0.2)

[a]Duration was longer in September 2016 because three sprayers were used each day compared to only two sprayers in July 2015 and June 2016.
[b]Arithmetic mean (AM) for 15-min temperature measurements.
[c]AM and standard deviation (ASD) for wind measurements. 15-min data to the left of each semicolon and 1-min data to the right. Data are reported from two locations: (i) 15-min averages from a wind cup anemometer located 70 m west of the sprayed block at 2 m elevation and (ii) 1-min averages from an ultrasonic anemometer located 190 m northeast of the sprayed block at 10 m elevation. Wind speed was measured in m/s and wind direction in azimuth degrees, where 0° or 360° represents wind from the north. Only 15-min data were available for 1–2 July 2015.

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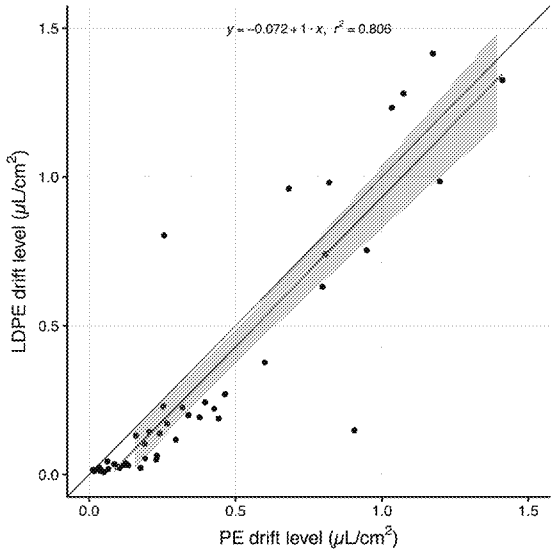

Figure 3. Tracer-based drift volume level collected on collocated polyester (PE) and low-density polyethylene (LDPE) lines, adjusted for cross sectional area, July 2015. Paired PE and LDPE drift levels were correlated (R^2 = 0.81), with PE collecting 0.072 μL/cm² more than LDPE, on average.

July 2015, June 2016, and September 2016 were 102–115, 82–101, and 92–108% (Supplementary Table S3 in the Supplementary Material, available at *Annals of Work Exposures and Health* online). Mean tank mix concentrations for Zn, Mo, and Cu across all AFA trials were 242, 7, and 123 μg/ml, respectively (Fig. 1; Supplementary Table S1 in the Supplementary Material, available at *Annals of Work Exposures and Health* online). Mean Zn, Mo, and Cu background concentrations in the water source as a percentage of tank mix concentrations were 0.056, 0.0077, and 0.00038%, respectively.

Mixed-effects model

Summary statistics indicate evidence of drift at distances up to 52 m downwind. Tracer-based drift volume levels for reference PE samples taken in the middle of the sprayed area (Mast A, n = 18) and 200 m upwind (Mast Q, n = 18) had GMs and GSDs of 1079 (2.3) and 10 (1.9) μl, respectively (Supplementary Table S4 in the Supplementary Material, available at *Annals of Work Exposures and Health* online).

Among 270 PE drift samples, 266 (98.5%) were above LOB (Table 2). The four values below LOB were 52 m downwind and at the 0–2 m mast height sections. The GM (GSD) for all drift levels was 66 (3.6) μl. When stratified by near (5 m), mid (26 m), and far (52 m) downwind distances, drift levels were 257 (1.8), 52 (2.0), and 20 (2.3) μl, respectively. When stratified by high (4–6 m), medium (2–4 m), and low (0–2 m) vertical heights, drift levels were 89 (2.5), 65 (3.4), and 51 (4.8) μl, respectively. When stratified by downwind distance and height, drift levels decreased with height at near distances, but increased with height at mid and far distances. As expected, the data were ln distributed. Subsequent analysis was on ln-transformed drift levels.

Table 3 provides point estimates and 95% confidence intervals for the mixed-effects model. Increasing distance was significantly associated with a decrease in drift level (−0.05; 95% CI: −0.06, −0.04; P < 0.001). This coefficient represents a −0.05 change in ln-μl drift volume per m distance. Higher height (0.16; 95% CI: 0.11, 0.20; P < 0.001) and wind speed (0.53; 95% CI: 0.35, 0.70; P < 0.001) were significantly associated with an increase in drift level. These coefficients represent a 0.16 change in ln-μl drift volume per m height and a 0.53 change in ln-μl drift volume per m/s, respectively.

More of the remaining variance was within-location (0.378, $\frac{0.378}{0.093+0.378}\times 100$ = 80.2%) than between-location (0.093; 19.8%). Distance, height, and wind speed impacted the between-location variance component (1.206–0.093; 92% reduction) considerably, but did not greatly alter the within-location component (0.499–0.378; 24% reduction). This difference in percent reduction suggests that there were relatively few systematic changes for individual locations across spray trials.

Discussion

This study characterized spray drift in an orchard work environment and developed a method for comparing the drift potential of different application technologies. We report tracer-based drift volume level, a useful metric that describes the tank mix volume equivalent intercepted by vertical sampling lines or drift as a percent of the applied tank volume. After adjusting for cross sectional area, we found that fibrous PE lines collected 0.072 μl/cm² more than collocated smooth LDPE lines, on average. We propose that this difference was due mainly to a higher collection efficiency via interception and impaction of smaller aerosols throughout the PE line matrix and, to a lesser extent, gravitational settling of larger aerosols on horizontal fibers.

A unique design feature of this study was that it drew from spatiotemporal characteristics of actual farmworker illness scenarios. Instead of spraying one or a few tree rows, our trials included repeated sprays in a 28-row orchard block. Other studies have measured airborne drift using vertical masts, but this was the first time a grid of such masts was used to characterize

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Table 2. Summary statistics[a] for tracer-based drift volume level (µl) collected on polyester line sampling matrices from axial fan airblast spray trials.

Sample	<LOB	N	AM	ASD	GM	GSD
Total drift samples	4	266	136	179	66	3.6
Downwind distance[b]						
Near (5 m)	0	90	310	216	257	1.8
Mid (26 m)	0	90	66	42	52	2.0
Far (52 m)	4	86	28	24	20	2.3
Vertical height[c]						
High (4–6 m)	0	90	134	145	89	2.5
Medium (2–4 m)	0	90	132	190	65	3.4
Low (0–2 m)	4	86	142	201	49	4.8
Near (5 m) distance at height						
High (4–6 m)	0	30	266	183	222	1.8
Medium (2–4 m)	0	30	310	244	252	1.9
Low (0–2 m)	0	30	354	215	304	1.8
Mid (26 m) distance at height						
High (4–6 m)	0	30	90	47	77	1.8
Medium (2–4 m)	0	30	63	35	53	1.8
Low (0–2 m)	0	30	44	29	35	2.0
Far (52 m) distance at height[d]						
High (4–6 m)	0	30	47	26	41	1.8
Medium (2–4 m)	0	30	25	16	20	1.9
Low (0–2 m)	4	26	11	6	9	1.8

[a]Listed by limit of blank (LOB), number of measurements (N), arithmetic mean (AM), arithmetic standard deviation (ASD), geometric mean (GM), and geometric standard deviation (GSD). N is reflective of each micronutrient tracer analyzed via inductively coupled plasma mass spectrometry (ICP-MS).
[b]As shown in Fig. 1, downwind sampling rows were at distances of 5 (Near), 26 (Mid), and 52 (Far) m from the southern edge of the sprayed area. These correspond to Masts B-F (Near), G-K (Mid), and L-P (Far).
[c]Sampling heights were categorized in terms of 2 m polyester (PE) line sections taken at 4–6 m (High), 2–4 m (Medium), and 0–2 m (Low) above the ground.
[d]AM (and GM) for High, Medium, and Low heights at Far distances were 3.9 (3.7), 1.5 (1.7), and 1.6 (1.3) times greater than background levels measured at the upwind reference location (Mast Q). See Supplementary Table S4 (available at *Annals of Work Exposures and Health* online) for reference location values. All measurements were corrected for lab matrix blank values.

Table 3. Coefficients for determinants of drift from axial fan airblast spray trials[a].

Fixed effects	Model estimate (95% CI)	SE	*P*-value
Intercept	3.17 (2.48, 3.87)	0.36	<0.001
Distance (m)	−0.05 (−0.06, −0.04)	0.01	<0.001
Height (m)	0.16 (0.11, 0.20)	0.23	<0.001
Wind speed (m/s)	0.53 (0.35, 0.70)	0.09	<0.001
Variance components[b]	Random and fixed effects included	Only random effect included	
Within-location (Residual)	0.378 (80.2%)	0.499 (29.3%)	
Between-location (Intercept)	0.093 (19.8%)	1.206 (70.7%)	
Total variance	0.471 (100%)	1.705 (100%)	

[a]There were 266 tracer-based drift volume levels (ln-µL) measured on polyester lines at 15 downwind locations in six spray trials.
[b]When the fixed effects were dropped from the model, within-location variance was 0.499 (29.3%) and between-location variance was 1.206 (70.7%). Fixed effects impacted the between-location component of the variance (1.206–0.093; 92% reduction) considerably, but did not alter the within-location component of variance (0.499–0.378; 24% reduction) as much. The difference between these models suggests that there were relatively few systematic changes for individual locations across spray trials.

the variability of drift levels in a downwind orchard block. We used a mixed-effects model to investigate the relationship between orchard work environment characteristics and between- and within-location variance components of drift levels, enabling future development of similar exposure groupings for orchard workers.

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'Tree canyon effects', akin to urban street canyon effects (Sini et al., 1996), may isolate components of wind flow below the canopy where orchard workers are often located. Using an orchard spray drift model and light detection and ranging (LIDAR), Tsai (2007) demonstrated the complex movement of within-canopy spray, which can escape the end of tree rows as drift when aligned with wind direction.

Study results highlight the importance of differentiating buffers not only by sprayer type and distance, but also by wind speed, orchard architecture, and sampling height (e.g. workers on the ground or on ladders). As expected, drift levels decayed with downwind distance (Table 2). Drift was measured up to 52 m downwind, which is approximately 1.7 times greater than the 30 m (100 ft) AEZ buffer for orchard sprayers defined by the Worker Protection Standard (USEPA, 2016b). Based on this standard, the first two rows of our sampling area should have been free of all persons other than appropriately trained and equipped handlers when the sprayer was at the southern edge of the sprayed block (USEPA, 2016b). As distance from the sprayed block increased, vertical profiles indicated more deposition on the highest line section (4–6 m) relative to lower sections. GM drift levels for high (4–6 m), medium (2–4 m), and low (0–2 m) heights at far (52 m) distances were 3.7, 1.7, and 1.3 times greater than background levels measured at the reference samples 200 m upwind.

Our findings are largely consistent with other orchard-based field studies. A recent meta analysis of spray drift sampling found that 4.4% of total pesticide applied was measured between 0 and 5 m downwind of fully leafed orchards (Donkersley and Nuyttens, 2011). In our study, we estimate that 1.7% $\left(\frac{0.000310l \times 21{,}000}{378l} \times 100\right)$ of the total volume applied was measurable 5 m downwind; this percentage is based on an AM drift level of 0.000310 l (310 µl) measured 5 m downwind from an applied volume of 378 l during each trial and a vertical sampling field surface area (504 m^2 = 84 m wide by 6 m tall) that was 21,000 times larger than the PE line cross sectional area (0.024 m^2; 240 cm^2). At 5 m downwind, Cross et al. (2001a) measured normalized spray deposits on 0–4 m sections of vertical sampling lines that were two to five times greater than those on 4–6 m sections. We observed deposits that were 1.2 $\left(\frac{354}{0.5(310+266)}\right)$ times greater, on average. Fox et al. (1993) reported that deposits on floss decreased with height at 7.5 m downwind, but were more uniform across all heights at 15, 30, and 60 m downwind. Butler Ellis et al. (2014) reported that average bystander exposures were higher when wind was directed along orchard rows and that bystander exposure showed a high level of variability.

There are several limitations to this study. First, it modeled values from stationary area sampling instead of workers. Potential exposure estimates are not provided because we have not addressed the relationship between PE lines and a human body. Though outside the scope of this paper, we believe such work is possible by using, for example, measured drift volume levels, product label mixing instructions, and publicly available statistical data about human factors used to assess exposure. Second, data were collected in one orchard and may not be representative of other planting systems or sprayer configurations, such as adapted airflow or different nozzles (Khot et al., 2012). Also, tree row orientation in the sprayed block was parallel to the prevailing wind direction as opposed to perpendicular, which is required by some protocols (ASABE, 2004; ISO, 2005). Third, although the field team followed detailed standard operating procedures for prespray sample setup and postspray sample harvesting, some sample surfaces contacted gloved hands, tree leaves, or the ground; however, inclusion or exclusion of these potentially contaminated samples (n = 12; 4%) did not change our findings.

We recommend vertical passive sampling with PE lines and micronutrient tracers in future assessments of orchard drift. Drift levels measured by highly efficient, nonuniform surfaces such as PE lines could be used to estimate potential worker exposure and validate other models such as BROWSE (Butler Ellis et al., 2017a,b). As part of our larger study, we found that optical particle counters, despite limitations that do not allow for analysis of chemical composition or detection of particles with diameters smaller than 0.5 µm, can detect drift plumes and finer time-resolved data on aerosol levels (Blanco et al., 2017). This approach may hold promise for real-time monitoring of human exposure during drift events. To better understand how orchard drift dynamics contribute to environmental and occupational exposures, it would be ideal to take measurements from actual workers involved in actual drift events. Such studies would require equipping orchardists and orchard workers with low-cost and easy-to-use sensors such as on-site meteorological stations and direct-reading particle counters to identify when drift reaches a level of concern for human exposure.

Conclusions

Our study measured tracer-based drift volume levels from a conventional AFA sprayer in a modern orchard. The field site proved to be ideal for the spray trials because it adhered to applicable drift sampling standards. Vertical PE

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lines captured greater drift levels than LDPE lines. Buffers are likely to offer drift exposure protection to orchard workers near an active AFA sprayer. However, drift was measured well beyond the USEPA 'Application Exclusion Zone' buffer. Buffers for airblast applications could be further defined by factors such as worker location, wind speed, and features of orchard architecture such as tree canopy shape, height, and density. Data from our study may prove useful for estimating potential orchard worker exposure and validating bystander drift exposure models.

Supplementary Data

Supplementary data are available at *Annals of Work Exposures and Health* online.

Acknowledgements

Field study logistics were supported by Washington State University Tree Fruit Research & Extension Center, Washington Tree Fruit Research Commission, and Vine Tech Equipment. Samples were collected by the PNASH Center field team (Pablo Palmández, Maria Negrete, Maria Tchong-French, Jane Pouzou, Jose Carmona, Ryan Babadi, Christine Perez Delgado). Chemical analyses were conducted by the DEOHS Environmental Health Laboratory (Catherine Signoretty, Russell Dills). Informatics and computing support was provided by Brian High and the DEOHS Information Technology Team. Some weather data provided courtesy of and copyright by Washington State University AgWeatherNet. Contents are solely the responsibility of the authors.

Funding

Funding for this project was provided by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health through Cooperative Agreement #5 U54 OH007544 with the Pacific Northwest Agricultural Safety and Health (PNASH) Center. Additional support was provided by the Washington State Medical Aid & Accident Funding Initiative through the University of Washington Department of Environmental and Occupational Health Sciences (DEOHS).

Conflict of Interest

The authors declare no conflict of interest relating to the material presented in this article. Its contents, including any opinions and/or conclusions expressed, are solely those of the authors.

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Exhibit B

COUNTY OF SANTA CRUZ

OFFICE OF THE AGRICULTURAL COMMISSIONER
Juan Hidalgo
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES

June 1, 2018

NOTICE OF PROPOSED ACTION,
NATURE OF VIOLATION, AND
RIGHT TO REQUEST HEARING

Via Certified Mail
Return Receipt Requested

FILE NO. 44171803

TO: LOS AMIGOS HARVESTING
Farm Labor Contractor License Number: FLC000234426
Attn: Patti Garrett
401 Hames Road
Watsonville, CA 95076

You are hereby notified that the Agricultural Commissioner for the County of Santa Cruz proposes that you be fined the amount of $56,000.00 as a civil penalty for violating California's pesticide laws as explained below. The authority for this action is granted to the County Agricultural Commissioner pursuant to the provisions of Section 12999.5 of the Food and Agricultural Code (FAC). The amount of this fine was determined by applying the circumstances of the violations to the fine regulations adopted for use in these actions. These regulations are found in Title 3, California Code of Regulations (3 CCR), section 6130, a copy of which is enclosed with this Notice of Proposed Action.

FACTUAL CIRCUMSTANCES

On June 29, 2017, between approximately 7:30 a.m. and 8:30 a.m., Los Amigos Harvesting applied Pristine Fungicide (EPA Reg. No. 7969-199, active ingredients pyraclostrobin and boscalid), Rally 40WSP (EPA Reg. No. 62719-410, active ingredient myclobutanil), DiPel DF (EPA Reg. No. 73049-39, active ingredient Bacillus thuringiensis) and Widespread Max (CA Reg. No. 34704-50061, active ingredient polyether-polymethylsiloxane-copolymer polyether) to treat a raspberry field (Garrett Farms site 1A Nugent Ranch) using a tractor-driven air delivery spray rig. Garrett Farms site 1A Nugent Ranch is located approximately 48 feet southeast of another raspberry field (Coastal Berry - North site 21A Bronson Ranch) where field worker employees of FMG Farm Contractor, Inc. (FMG) were harvesting. Prior to starting to spray the pesticides, the Los Amigos Harvesting applicator asked FMG employees how long they planned to be harvesting raspberries at Coastal Berry - North site 21A Bronson Ranch, and told them he was going to make a pesticide application but would stay a safe distance away and that they should signal him if they smelled the pesticides.
Shortly after Los Amigos Harvesting began spraying, multiple FMG employees working in Coastal Berry - North site 21A Bronson Ranch began to experience symptoms of acute illness. Of the twenty-four (24) FMG employees working at the site, fifteen (15) of these employees experienced one or more symptoms including

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nausea, vomiting, stomachache, headache, dizziness, difficulty breathing, high temperature, dry mouth, a bad taste in their mouth, and throat, eye and skin irritation. 9-1-1 emergency services was called by an FMG field crew supervisor at the site. Five (5) FMG employees exhibiting acute symptoms of pesticide exposure were decontaminated onsite by first responders (Watsonville Fire Department) and transported to Watsonville Community Hospital by ambulance; one (1) FMG employee sought medical care for acute symptoms of pesticide exposure at the same hospital later the same day; and two (2) additional FMG employees obtained professional medical care for acute symptoms of pesticide exposure at a local clinic the following day. The diagnoses/medical impressions of the professional medical providers attending to the eight (8) FMG employees were that the illness symptoms were caused by exposure to pesticide.
In subsequent interviews, multiple FMG employees reported that the pesticide application took place directly across from them, that they saw the mist from the pesticide application drifting toward where they were working, and that they could smell the pesticide odor in the field. Foliar samples taken from Coastal Berry - North site 21A Bronson Ranch where the FMG employees had been harvesting tested positive for pyraclostrobin, boscalid and myclobutanil.

Violation 1

3 CCR section 6614(b)(1)

California Code of Regulations Title 3, section 6614(b)(1) states, in pertinent part:

"Notwithstanding that substantial drift will be prevented, no pesticide application shall be made or continued when… (1) There is a reasonable possibility of contamination of the bodies or clothing of persons not involved in the application process…"

Los Amigos Harvesting applied the pesticides Pristine Fungicide, Rally 40WSP, DiPel DF and Widespread Max with an air delivery spray rig in close proximity to FMG employees harvesting raspberries at Coastal Berry - North site 1A Bronson Ranch. Los Amigos Harvesting did not wait for FMG employees to finish harvest activities and leave the area prior to making the pesticide application. Los Amigos Harvesting applied the pesticides with a tractor-hitched air delivery sprayer that produced a "very fine" spray droplet size with a high potential for drift. Los Amigos Harvesting operated the spray rig in a N/NE to S/SW pattern while applying the pesticides, resulting in pesticides from the air delivery sprayer being discharged in the direction of nearby FMG employees. The applied pesticides moved off target to Coastal Berry - North site 1A Bronson Ranch where FMG employees were working, causing an actual health hazard resulting in multiple FMG employees experiencing acute illness symptoms and eight (8) of said employees requiring professional medical care due to their symptoms. The diagnoses/medical impressions of the professional medical providers attending to the eight (8) symptomatic FMG employees were that the illness symptoms were caused by exposure to pesticide. Foliar samples taken from Coastal Berry - North site 21A Bronson Ranch where the FMG employees had been harvesting were tested for pyraclostrobin, boscalid and myclobutanil, the active ingredients in Pristine Fungicide and Rally WSP, and came back positive for said active ingredients. Los Amigos Harvesting therefore applied pesticides in a way that created a reasonable possibility of contamination of the bodies or clothing of persons not involved in the application process.

Penalty

Section 12996.5(b) of the Food and Agricultural Code states: "The exposure of each person to a pesticide resulting from the violation of section 12972 or 12973, or any regulation adopted pursuant to section 12976, 12981, or 14005, that causes acute illnesses or injury, shall constitute a separate violation of the statute or regulation."

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This violation is considered a "Class A" violation. According to Section 6130 of the California Code of Regulations, Title 3, violations are designated as "Class A", "Class B", and "Class C." A "Class A" violation is a violation of a law or regulation that caused a health, property or environmental hazard. The fine range for a "Class A" violation is $700.00 to $5,000.00. Having considered the respondent's compliance history in light of its recent initiation of operations, due to the nature of the violation, including the potential effects the violation had on the twenty-four (24) people who were subject to potential exposure by multiple pesticides, the severity of the actual effects the violation had on the fifteen (15) people who were exposed to multiple pesticides and suffered symptoms and medical conditions consistent with pesticide exposure; and the increased severity of the actual effects the violation had on the eight (8) people who were exposed to multiple pesticides and suffered acute symptoms and medical conditions from same which necessitated the need for professional medical care and attention, the Agricultural Commissioner proposes to fine you $5,000.00 each for eight (8) separate counts of the above described violation for a total of $40,000.00.

Violation 2

3 CCR section 6614(b)(3)

California Code of Regulations Title 3, section 6614(b)(3) states, in pertinent part:

"Notwithstanding that substantial drift will be prevented, no pesticide application shall be made or continued when… (3) There is a reasonable possibility of contamination of nontarget public or private property, including the creation of a health hazard, preventing normal use of such property…."

Los Amigos Harvesting applied the pesticides Pristine Fungicide, Rally 40WSP, DiPel DF and Widespread Max with an air delivery spray rig in close proximity to Coastal Berry - North site 1A Bronson Ranch where an FMG harvest crew was working. Los Amigos Harvesting applied the pesticides with a tractor-hitched air delivery sprayer that produced a "very fine" spray droplet size with a high potential for drift. Los Amigos Harvesting operated the spray rig in a N/NE to S/SW pattern while applying the pesticides, resulting in pesticides from the air delivery sprayer being discharged in the direction of Coastal Berry - North site 1A Bronson Ranch where an FMG harvest crew was working. The applied pesticides moved off-target and contaminated nontarget property Coastal Berry - North site 21A Bronson Ranch, preventing normal use of said property by causing raspberry harvest activities to be discontinued and subjecting FMG employees to pesticide drift and resultant illness symptoms. Foliar samples taken from Coastal Berry - North site 21A Bronson Ranch where the FMG employees had been working were tested for pyraclostrobin, boscalid and myclobutanil, the active ingredients in Pristine Fungicide and Rally WSP, and came back positive for said active ingredients. Los Amigos Harvesting therefore applied pesticides in a way that created a reasonable possibility of contamination of a nontarget private property, including the creation of a health hazard, preventing normal use of such property.

Penalty

This violation is considered a "Class A" violation. According to Section 6130 of the California Code of Regulations, Title 3, violations are designated as "Class A", "Class B", and "Class C." A "Class A" violation is a violation of a law or regulation that caused a health, property or environmental hazard. The fine range for a "Class A" violation is $700.00 to $5,000.00. Having considered the respondent's compliance history in light of its recent initiation of operations, due to the nature of the violation, including the potential effects the violation had on the twenty-four (24) people who were subject to potential exposure by multiple pesticides, the severity of the actual effects the violation had on the fifteen (15) people who were exposed to multiple pesticides and suffered symptoms and medical conditions consistent with pesticide exposure; and the increased severity of the actual effects the violation had on the eight (8) people who were exposed to multiple pesticides and suffered

acute symptoms and medical conditions from same which necessitated the need for professional medical care and attention, the Agricultural Commissioner proposes to fine you $5,000.00 for the above described violation.

Violation 3

3 CCR section 6600(b)

California Code of Regulations Title 3, section 6600(b) states, in pertinent part:

"Each person performing pest control shall… (b) Perform all pest control in a careful and effective manner…"

Los Amigos Harvesting applied the pesticides Pristine Fungicide, Rally 40WSP, DiPel DF and Widespread Max with an air delivery spray rig in close proximity to Coastal Berry - North site 1A Bronson Ranch where an FMG harvest crew was working. Prior to spraying the pesticides, the Los Amigos Harvesting applicator asked FMG employees how long they planned to be harvesting raspberries at Coastal Berry - North site 21A Bronson Ranch, and told them he was going to make a pesticide application but would stay a safe distance away and that they should signal him if they smelled the pesticides, thereby acknowledging the potential for the pesticide application to impact the field workers. Los Amigos Harvesting did not wait for FMG employees to finish harvest activities and leave the area prior to making the pesticide application. The off-target movement of the applied pesticides created an actual health hazard for FMG employees harvesting raspberries at Coastal Berry - North site 21A Bronson Ranch. Los Amigos Harvesting therefore did not perform all pest control in a careful and effective manner.

Penalty

This violation is considered a "Class A" violation. According to Section 6130 of the California Code of Regulations, Title 3, violations are designated as "Class A", "Class B", and "Class C." A "Class A" violation is a violation of a law or regulation that caused a health, property or environmental hazard. The fine range for a "Class A" violation is $700.00 to $5,000.00. Having considered the respondent's compliance history in light of its recent initiation of operations, due to the nature of the violation, including the potential effects the violation had on the twenty-four (24) people who were subject to potential exposure by multiple pesticides, the severity of the actual effects the violation had on the fifteen (15) people who were exposed to multiple pesticides and suffered symptoms and medical conditions consistent with pesticide exposure; and the increased severity of the actual effects the violation had on the eight (8) people who were exposed to multiple pesticides and suffered acute symptoms and medical conditions from same which necessitated the need for professional medical care and attention, the Agricultural Commissioner proposes to fine you $5,000.00 for the above described violation.

Violation 4

FAC section 12973

California Food and Agricultural Code section 12973 states, in pertinent part:

"The use of any pesticide shall not conflict with the labeling registered pursuant to this chapter…"

The Pristine Fungicide, Rally 40WSP and DiPel DF labels state:

"Do not apply this product in a way that will contact workers or other persons, either directly or through drift."

Los Amigos Harvesting applied pesticides Pristine Fungicide, Rally 40WSP, DiPel DF and Widespread Max with an air delivery spray rig in close proximity to Coastal Berry - North site 1A Bronson Ranch where an FMG

harvest crew was working. Los Amigos Harvesting applied the pesticides with a tractor-hitched air delivery sprayer that produced a "very fine" spray droplet size with a high potential for drift. Los Amigos Harvesting operated the spray rig in a N/NE to S/SW pattern while applying the pesticides, resulting in pesticides from the air delivery sprayer being discharged in the direction of Coastal Berry - North site 1A Bronson Ranch where an FMG harvest crew was working. The applied pesticides moved off-target subjecting FMG employees to pesticide drift and resultant illness symptoms, with eight (8) of said employees obtaining professional medical care for acute symptoms of pesticide exposure. All eight (8) of the employees that received professional medical care for pesticide exposure reported seeing the pesticide application mist and experienced a strong/bad odor, and one (1) of these employees reported pesticide contaminating her skin and clothes and saw the surface of the harvesting trailer's table top wet with pesticide. Foliar samples taken from Coastal Berry - North site 21A Bronson Ranch where the FMG employees had been working were tested for pyraclostrobin, boscalid and myclobutanil, the active ingredients in Pristine Fungicide and Rally WSP, and came back positive for said active ingredients. Los Amigos Harvesting therefore applied Pristine Fungicide, Rally 40WSP, and DiPel DF in a way that contacted persons through drift in violation of the pesticide labels and California law.

Penalty

This violation is considered a "Class A" violation. According to Section 6130 of the California Code of Regulations, Title 3, violations are designated as "Class A", "Class B", and "Class C." A "Class A" violation is a violation of a law or regulation that caused a health, property or environmental hazard. The fine range for a "Class A" violation is $700.00 to $5,000.00. Having considered the respondent's compliance history in light of its recent initiation of operations, due to the nature of the violation, including the potential effects the violation had on the twenty-four (24) people who were subject to potential exposure by multiple pesticides, the severity of the actual effects the violation had on the fifteen (15) people who were exposed to multiple pesticides and suffered symptoms and medical conditions consistent with pesticide exposure; and the increased severity of the actual effects the violation had on the eight (8) people who were exposed to multiple pesticides and suffered acute symptoms and medical conditions from same which necessitated the need for professional medical care and attention, the Agricultural Commissioner proposes to fine you $5,000.00 for the above described violation.

Violation 5

FAC section 11701

California Food and Agricultural Code section 11701 states:

"It is unlawful for a person to advertise, solicit, or operate as a pest control business, unless the person has a valid pest control business license issued by the director."

The requirements for obtaining a pest control business license mitigate the risk of adverse health, property, or environmental effects by ensuring the business' pest control activities are supervised by a Qualified Applicator Licensee (QAL). The QAL is knowledgeable of California's pesticide use laws and regulations, supervises pesticide applications made by the licensed pest control business, and is responsible for its safe and legal pesticide use operations. Los Amigos Harvesting provided primary direction and control over the pesticide use related work, services or activities of their employee pesticide handler and was therefore operating as a pest control business without first obtaining a valid pest control business license.

Penalty

This violation is considered a "Class B" violation. According to Section 6130 of the California Code of Regulations, Title 3, violations are designated as "Class A", "Class B", and "Class C." A "Class B" violation is a violation of a law or regulation that mitigates the risk of adverse health, property, or environmental effects that

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is not designated as a "Class A." The fine range for a "Class B" violation is $250.00 to $1,000.00. Having considered the respondent's compliance history in light of its recent initiation of operations, due to the nature of the violation, including the potential effects the violation had on the twenty-four (24) people who were subject to potential exposure by multiple pesticides, the severity of the actual effects the violation had on the fifteen (15) people who were exposed to multiple pesticides and suffered symptoms and medical conditions consistent with pesticide exposure; and the increased severity of the actual effects the violation had on the eight (8) people who were exposed to multiple pesticides and suffered acute symptoms and medical conditions from same which necessitated the need for professional medical care and attention, the Agricultural Commissioner proposes to fine you $1,000.00 for the above described violation.

Penalty Summary

The Agricultural Commissioner proposes to fine you a total of $56,000.00 for the violations described above.

If you have any questions regarding this matter, please contact David Sanford, Deputy Agricultural Commissioner, at (831) 763-8080

Juan Hidalgo
Agricultural Commissioner/Sealer
County of Santa Cruz
175 Westridge Drive
Watsonville, CA 95076
(831) 763-8080

6/1/18
Date

You May Review the Evidence Against You
You are entitled to review the Commissioner's evidence supporting these charges. A copy of the written evidence supporting these charges is enclosed for your convenience.

You May Request a Hearing and Present Evidence at the Hearing
You may request a hearing to review the Commissioner's evidence, and to present any evidence, oral or written, on your behalf as to why the Commissioner should not take the proposed action. You are not required to be represented by legal counsel at the hearing. Your attorney may accompany you and represent you if you wish. You will be provided a written decision of the Commissioner's finding. Although not required by the authorizing statute, a tape-recording will be made of the hearing proceedings.

How to Request a Hearing – Failure to Request – FAC Section 12999.5
Any hearing in this matter will be scheduled and held at the office of the County Agricultural Commissioner, located at 175 Westridge Drive, Watsonville, CA 95076, if you request a hearing by signing, dating and returning the enclosed Hearing Request within 20 days of receipt of the Notice of Proposed Action. Failure to timely request a hearing is a waiver of the right to a hearing. The Commissioner may take the action proposed in this notice without a hearing. Further, failure to request a hearing is a waiver of your right to appeal the Commissioner's decision.

Stipulation and Waiver to Order – FAC Section 12999.5
If you do not wish to request a hearing to contest the charges and proposed action, you may stipulate (agree) to the enclosed Order by dating, signing, and returning the enclosed Stipulation and Waiver to Order within 20 days of receipt of this notice.

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Appeal Rights After Hearing – FAC Section 12999.5
Should you disagree with the Commissioner's decision after requesting and appearing at a hearing, you may request an appeal to the Director of the Department of Pesticide Regulation within 30 days of receiving the Commissioner's decision and order. However, you waive these appeal rights if you do not request and attend the hearing at the scheduled time and date, or if you fail to request an appeal within the 30-day time frame.

The request for appeal must be mailed to the Director of the Department of Pesticide Regulation, 1001 I Street, P.O. Box 4015, Sacramento, California 95812-4015.

The request for appeal:

1. Must be in writing and signed by you or your authorized agent; and
2. Must state the grounds for the appeal; and
3. Must include a copy of the Commissioner's Decision and Order; and
4. Must (sec 12999.5(d), et seq) be filed or mailed to the Commissioner at the same time you mail it to the Director.

Failure to follow any of the above requirements may affect your right to appeal.

If the Director grants an appeal, you will receive the Director's written decision approximately 45 days after receipt of your appeal, or as soon thereafter as practical.

Pesticide Incident Reimbursement Notice – FAC Section 12997.5
In addition to any penalties paid in connection with an enforcement action taken pursuant to Sections 12996, 12997, 12999, and 12999.5, any person who is found in violation of any provision of this division related to pesticides or any regulation related to pesticides adopted pursuant to this division that results in illness or injury requiring emergency medical transport or immediate medical treatment of any individual in a nonoccupational setting from any pesticide used in the production of an agricultural commodity, shall be liable to the individual harmed or to the medical provider for the immediate costs of uncompensated medical care from acute injuries and illnesses of the exposed individual.

ENCLOSURES

A copy of the text of 3 CCR, section 6130, and California FAC section 12999.5 are enclosed for your convenience.

A copy of Pesticide Illness Priority Investigation Report #49-SCR-17 with attachments. (**Please note that this report includes documents containing protected health information. These documents are not public records and may not be disclosed outside of a legal or administrative process that directly concerns the subject of this report.**)

A copy of the pamphlet "Preparing for Your Administrative Hearing" has been enclosed in order to assist you should you choose to request a hearing.

A copy of the California Department of Pesticide Regulation informational handout "Reimbursing Medical Costs of Persons Injured in Pesticide Incidents" has been enclosed for your information.

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COUNTY OF SANTA CRUZ

OFFICE OF THE AGRICULTURAL COMMISSIONER
Juan Hidalgo
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES

ORDER

FILE NO. 44171803

TO: LOS AMIGOS HARVESTING
Farm Labor Contractor License Number: FLC000234426
Attn: Patti Garrett
401 Hames Road
Watsonville, CA 95076

ORDER: It is hereby ordered that LOS AMIGOS HARVESTING is fined $56,000.00. The fine is due now and payable.

Juan Hidalgo
Agricultural Commissioner/Sealer
175 Westridge Drive
Watsonville, CA 95076
(831)763-8080

Instructions to Respondent:
If you wish to pay the fine and not request (waive) a hearing, you may sign the Stipulation and Waiver to Order below. By doing so, you also waive your right to an appeal or any other review in this matter. If you wish to sign the Stipulation and Waiver to Order, you must submit it to the Agricultural Commissioner within 20 days of receipt of this notice.

STIPULATION AND WAIVER TO ORDER

I hereby stipulate that the Agricultural Commissioner's Notice of Proposed Action in the above-entitled matter states grounds for civil penalty action based on the evidence now before the Commissioner.

Without admitting to the violations alleged in the Notice of Proposed Action, I stipulate to the Commissioner's Order, as set forth above, and I waive all rights to a hearing and appeal or any other review in this matter.

Respondent's Signature _____ Date _____

Make the check payable to: "County of Santa Cruz". Mail the check and signed **Stipulation and Waiver to Order** to:

Juan Hidalgo
Agricultural Commissioner/Sealer
175 Westridge Drive
Watsonville, CA 95076

COUNTY OF SANTA CRUZ

OFFICE OF THE AGRICULTURAL COMMISSIONER
Juan Hidalgo
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES

HEARING REQUEST

ACKNOWLEDGEMENT OF RECEIPT OF PROPOSED NOTICE OF ACTION AND REQUEST FOR HEARING

FILE NO. 44171803

TO: LOS AMIGOS HARVESTING
Farm Labor Contractor License Number: FLC000234426
Attn: Patti Garrett
401 Hames Road
Watsonville, CA 95076

I, the undersigned respondent in this proceeding, hereby acknowledge receipt of a copy of the Notice of Proposed Action.

I hereby request a hearing to permit me to have an opportunity to present my defense to the violations contained in the Notice of Proposed Action.

_____ _____
Respondent's Signature Date

_____
Respondent's Name (printed)

_____
Telephone

Mail this form to: Juan Hidalgo
Agricultural Commissioner/Sealer
175 Westridge Drive
Watsonville, CA 95076

Exhibit C

COUNTY OF SANTA CRUZ

OFFICE OF THE AGRICULTURAL COMMISSIONER
Juan Hidalgo
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES

June 1, 2018

NOTICE OF PROPOSED ACTION,
NATURE OF VIOLATION, AND
RIGHT TO REQUEST HEARING

FILE NO. 44171804

TO: FMG FARM CONTRACTOR, INC.
Farm Labor Contractor License Number: FLC000185517
Attn: Francisco Mora Gonzales
800 5th Street, Suite 5
Gonzales, CA 93926

You are hereby notified that the Agricultural Commissioner for the County of Santa Cruz proposes that you be fined the amount of $1,250.00 as a civil penalty for violating California's pesticide law(s) as explained below. The authority for this action is granted to the County Agricultural Commissioner pursuant to the provisions of Section 12999.5 of the Food and Agricultural Code (FAC). The amount of this fine was determined by applying the circumstances of the violations to the fine regulations adopted for use in these actions. These regulations are found in Title 3, California Code of Regulations (3 CCR), section 6130, a copy of which is enclosed with this Notice of Proposed Action.

FACTUAL CIRCUMSTANCES

On June 29, 2017, between approximately 7:30 a.m. and 8:30 a.m., Los Amigos Harvesting applied Pristine Fungicide (EPA Reg. No. 7969-199, active ingredients pyraclostrobin and boscalid), Rally 40WSP (EPA Reg. No. 62719-410, active ingredient myclobutanil), DiPel DF (EPA Reg. No. 73049-39, active ingredient Bacillus thuringiensis) and Widespread Max (CA Reg. No. 34704-50061, active ingredient polyether-polymethylsiloxane-copolymer polyether) to treat a raspberry field (Garrett Farms site 1A Nugent Ranch) using a tractor-driven air delivery spray rig. Garrett Farms site 1A Nugent Ranch is located approximately 48 feet southeast of another raspberry field (Coastal Berry - North site 21A Bronson Ranch) where field worker employees of FMG Farm Contractor, Inc. (FMG) were harvesting. Prior to starting to spray the pesticides, the Los Amigos Farms applicator asked FMG employees how long they planned to be harvesting raspberries at Coastal Berry - North site 21A Bronson Ranch, and told them he was going to make a pesticide application but would stay a safe distance away and that they should signal him if they smelled the pesticides.

Shortly after Los Amigos Harvesting began spraying, multiple FMG employees working in Coastal Berry - North site 21A Bronson Ranch began to experience symptoms of acute illness. Of the twenty-four (24) FMG

employees working at the site, fifteen (15) of these employees experienced one or more symptoms including nausea, vomiting, stomachache, headache, dizziness, difficulty breathing, high temperature, dry mouth, a bad taste in their mouth, and throat, eye and skin irritation. 9-1-1 emergency services was called by an FMG field crew supervisor at the site. Five (5) FMG employees exhibiting acute symptoms of pesticide exposure were decontaminated onsite by first responders (Watsonville Fire Department) and transported to Watsonville Community Hospital by ambulance; one (1) FMG employee sought medical care for acute symptoms of pesticide exposure at the same hospital later the same day; and two (2) additional FMG employees obtained professional medical care for acute symptoms of pesticide exposure at a local clinic the following day. The diagnoses/medical impressions of the professional medical providers attending to the eight (8) FMG employees were that the illness symptoms were caused by exposure to pesticide.

Foliar samples taken from Coastal Berry - North site 21A Bronson Ranch where the FMG employees had been harvesting tested positive for pyraclostrobin, boscalid and myclobutanil. During the course of the investigation it was found that in addition to the eight (8) employees that received medical care, five (5) other FMG employees at the referenced site had informed their foreperson of illness symptoms but FMG failed to ensure these employees were taken to a physician. FMG Farm Contractor, Inc. is found in violation of two (2) of California's pesticide laws and regulations, as cited below:

Violation 1

3 CCR section 6766(c)

California Code of Regulations Title 3, section 6766(c) states, in pertinent part:

"When there are reasonable grounds to suspect that an employee has a pesticide illness, or when an exposure to a pesticide has occurred that might reasonably be expected to lead to an employee's illness, the employer shall ensure that the employee is taken to a physician immediately."

Twenty-four (24) FMG employees working in Coastal Berry – North site 21A Bronson Ranch were reasonably exposed to the pesticides applied by Los Amigos Harvesting on Garrett Farms site 1A Nugent Ranch on June 29, 2017. Of the twenty-four (24) FMG employees working at the site, fifteen (15) of these employees experienced one or more symptoms including nausea, vomiting, stomachache, headache, dizziness, difficulty breathing, high temperature, dry mouth, a bad taste in their mouth, and throat, eye and skin irritation. Eight (8) FMG employees required and received professional medical care as a result of the pesticide exposure. Another five (5) FMG employees had informed their foreperson of illness symptoms but FMG failed to ensure these employees were taken to a physician.

Penalty

Having considered the respondent's compliance history, due to the nature of the violation, and taking into account that there were reasonable grounds to suspect that an employee may become ill due to the exposure to pesticides, the Agricultural Commissioner proposes to fine you $1,000.00 for the above described violation. According to Section 6130 of the California Code of Regulations, Title 3, violations are designated as "Class A", "Class B", and "Class C." This violation is considered a "Class B" violation. A "Class B" violation is a violation of a law or regulation that mitigates the risk of adverse health, property, or environmental effects that is not designated as a "Class A."

The fine range for a "Class B" violation is $250.00 to $1,000.00. This fine for violating 3 CCR 6766(c) is set at the top of the fine range because five (5) FMG employees reported feeling sick to the FMG foreperson and FMG failed to ensure that these employees were taken to a physician when there were reasonable grounds to

suspect that an employee may become ill. Ensuring that ill employees or employees that may be expected to become ill due to a pesticide exposure are taken to a physician immediately mitigates health effects that may lead to further injury to the employee.

Violation 2

3 CCR section 6764(a)

California Code of Regulations Title 3, section 6764(a) states, in pertinent part:

"The employer shall assure that each employee assigned to work in a treated field has been trained within the last 12 months, in a manner the employee understands, before beginning work in the treated field."

During the investigation of the exposure incident on June 29, 2018, it was discovered through employee interviews and training documents that two (2) FMG employees had not received requisite training in the prior 12-month period.

Penalty

The Agricultural Commissioner proposes to fine you $250.00 for the above described violation. According to Section 6130 of the California Code of Regulations, Title 3, violations are designated as "Class A", "Class B", and "Class C." This violation is considered a "Class B" violation. A "Class B" violation is a violation of a law or regulation that mitigates the risk of adverse health, property, or environmental effects that is not designated as a "Class A."

The fine range for a "Class B" violation is $250.00 to $1,000.00. The fine for this violation of 3 CCR 6764(a) is set at the bottom of the fine range at $250.00 because whereas the majority of the FMG employees working on the morning of June 29, 2017, at treated field Coastal Berry - North site 21A Bronson Ranch had received the required training in the prior 12-month period, two (2) of said employees had not received the required training. Referenced required training includes pesticide exposure safety information which mitigates the risk of adverse health effects for employees that may be exposed to pesticides.

Penalty Summary

The Agricultural Commissioner proposes to fine you a total of $1,250.00 for the violations described above.

If you have any questions regarding this matter, please contact David Sanford, Deputy Agricultural Commissioner, at (831) 763-8080

Juan Hidalgo
Agricultural Commissioner/Sealer
County of Santa Cruz
175 Westridge Drive
Watsonville, CA 95076
(831) 763-8080

6/1/18
Date

You May Review the Evidence Against You
You are entitled to review the Commissioner's evidence supporting these charges. A copy of the written evidence supporting these charges is enclosed for your convenience.

You May Request a Hearing and Present Evidence at the Hearing
You may request a hearing to review the Commissioner's evidence, and to present any evidence, oral or written, on your behalf as to why the Commissioner should not take the proposed action. You are not required to be represented by legal counsel at the hearing. Your attorney may accompany you and represent you if you wish. You will be provided a written decision of the Commissioner's finding. Although not required by the authorizing statute, a tape-recording will be made of the hearing proceedings.

How to Request a Hearing – Failure to Request – FAC Section 12999.5
Any hearing in this matter will be scheduled and held at the office of the County Agricultural Commissioner, located at 175 Westridge Drive, Watsonville, CA 95076, if you request a hearing by signing, dating and returning the enclosed Hearing Request within 20 days of receipt of the Notice of Proposed Action. Failure to timely request a hearing is a waiver of the right to a hearing. The Commissioner may take the action proposed in this notice without a hearing. Further, failure to request a hearing is a waiver of your right to appeal the Commissioner's decision.

Stipulation and Waiver to Order – FAC Section 12999.5
If you do not wish to request a hearing to contest the charges and proposed action, you may stipulate (agree) to the enclosed Order by dating, signing, and returning the enclosed Stipulation and Waiver to Order within 20 days of receipt of this notice.

Appeal Rights After Hearing – FAC Section 12999.5
Should you disagree with the Commissioner's decision after requesting and appearing at a hearing, you may request an appeal to the Director of the Department of Pesticide Regulation within 30 days of receiving the Commissioner's decision and order. However, you waive these appeal rights if you do not request and attend the hearing at the scheduled time and date, or if you fail to request an appeal within the 30-day time frame.

The request for appeal must be mailed to the Director of the Department of Pesticide Regulation, 1001 I Street, P.O. Box 4015, Sacramento, California 95812-4015.

The request for appeal:

1. Must be in writing and signed by you or your authorized agent; and
2. Must state the grounds for the appeal; and
3. Must include a copy of the Commissioner's Decision and Order; and
4. Must (sec 12999.5(d), et seq) be filed or mailed to the Commissioner at the same time you mail it to the Director.

Failure to follow any of the above requirements may affect your right to appeal.

If the Director grants an appeal, you will receive the Director's written decision approximately 45 days after receipt of your appeal, or as soon thereafter as practical.

ENCLOSURES

A copy of the text of 3 CCR, section 6130, and California FAC section 12999.5 are enclosed for your convenience.

A copy of Pesticide Illness Priority Investigation Report #49-SCR-17 with attachments. (**Please note that this report includes documents containing protected health information. These documents are not public records and may not be disclosed outside of a legal or administrative process that directly concerns the subject of this report.)**

A copy of the pamphlet "Preparing for Your Administrative Hearing" has been enclosed in order to assist you should you choose to request a hearing.

COUNTY OF SANTA CRUZ

OFFICE OF THE AGRICULTURAL COMMISSIONER
Juan Hidalgo
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES

ORDER

FILE NO. 44171804

TO: FMG FARM CONTRACTOR, INC.
Farm Labor Contractor License Number: FLC000185517
Attn: Francisco Mora Gonzales
800 5th Street, Suite 5
Gonzales, CA 93926

ORDER: It is hereby ordered that FMG FARM CONTRACTOR, INC. is fined $1,250.00. The fine is due now and payable.

Juan Hidalgo
Agricultural Commissioner/Sealer
175 Westridge Drive
Watsonville, CA 95076
(831)763-8080

Instructions to Respondent:
If you wish to pay the fine and not request (waive) a hearing, you may sign the Stipulation and Waiver to Order below. By doing so, you also waive your right to an appeal or any other review in this matter. If you wish to sign the Stipulation and Waiver to Order, you must submit it to the Agricultural Commissioner within 20 days of receipt of this notice.

STIPULATION AND WAIVER TO ORDER

I hereby stipulate that the Agricultural Commissioner's Notice of Proposed Action in the above-entitled matter states grounds for civil penalty action based on the evidence now before the Commissioner.

Without admitting to the violations alleged in the Notice of Proposed Action, I stipulate to the Commissioner's Order, as set forth above, and I waive all rights to a hearing and appeal or any other review in this matter.

Respondent's Signature _____ Date _____

Make the check payable to: "County of Santa Cruz". Mail the check and signed **Stipulation and Waiver to Order** to:

Juan Hidalgo
Agricultural Commissioner/Sealer
175 Westridge Drive
Watsonville, CA 95076

COUNTY OF SANTA CRUZ

OFFICE OF THE AGRICULTURAL COMMISSIONER
Juan Hidalgo
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES

HEARING REQUEST

ACKNOWLEDGEMENT OF RECEIPT OF PROPOSED NOTICE OF ACTION AND REQUEST FOR HEARING

FILE NO. 44171804

TO: FMG FARM CONTRACTOR, INC.
Farm Labor Contractor License Number: FLC000185517
Attn: Francisco Mora Gonzales
800 5th Street, Suite 5
Gonzales, CA 93926

I, the undersigned respondent in this proceeding, hereby acknowledge receipt of a copy of the Notice of Proposed Action.

I hereby request a hearing to permit me to have an opportunity to present my defense to the violations contained in the Notice of Proposed Action.

_____ _____
Respondent's Signature Date

_____
Respondent's Name (printed)

_____
Telephone

Mail this form to: Juan Hidalgo
Agricultural Commissioner/Sealer
175 Westridge Drive
Watsonville, CA 95076

Exhibit D

STATE OF CALIFORNIA

PESTICIDE EPISODE INVESTIGATION REPORT

PR-ENF-127 (REV 8/07) PAGE 1 OF 1

DEPARTMENT OF PESTICIDE REGULATION
ENFORCEMENT BRANCH

A. GENERAL INFORMATION

RECEIVED BY	RECEIVED FROM	REPRESENTING	DATE/TIME RECEIVED	PERSON NOTIFIED	DATE
ita Cruz CAC	Public	Unknown	6/29/17 0845 [X] AM [ ] PM	DFA	
				DFG	
				DPH	
				DIR	
				EPA	
				CAC	
				OTHER	

TYPE OF EPISODE: [X] HUMAN EFFECTS # 8 [ ] PROPERTY LOSS $ [ ] ENVIRONMENTAL EFFECTS [ ] OTHER

PRIORITY INVESTIGATION: [X] YES # 49-SCR-17 [ ] NO

OTHER I.D. NO.	COUNTY OF OCCURRENCE	DATE OF OCCURRENCE	TIME
CAC #17-07	Santa Cruz	MO 6 DAY 29 YR 17	0800 [X] AM [ ] PM

EPISODE LOCATION: East Lake and Wagner Aves., Watsonville, California

B. INJURED/COMPLAINANT INFORMATION

COMPLAINT SIGNED: [ ] YES [ ] NO [X] N/A

DOCTOR VISITED: [X] YES [ ] NO [ ] N/A

EXTENT OF INJURY/ILLNESS: [ ] Fatal [X] Symptoms [ ] Serious [ ] Exposed Only

ACTIVITY OF PERSON EXPOSED/INVOLVED: [ ] Mixer/Loader [X] Field worker* [ ] Other* [ ] Applicator [ ] Public* *Explain berry harvest

[redacted] | AGE [redacted] | SEX [redacted] | WHS NUMBER [redacted] | WORKDAYS LOST see report

ADDRESS (Number and Street, City, State, ZIP Code) [redacted]

MEDICAL FACILITY NAME		HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
Watsonville Community Hospital	[X] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [X] NO	6/29/17 at 0919 hrs	6/29/17 at 1046 hrs

PHYSICIAN	ADDRESS (Number and Street, City, State, ZIP Code)	PHONE
see report	n/a	n/a

SIGNS/SYMPTOMS EXPERIENCED: nausea, vomiting

EMPLOYER	ADDRESS (Number and Street, City, State, ZIP Code)	PHONE
FMG Farm Contractor, Inc.	800 5th Street, Gonzales, CA, 93926	831-675-0007

PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[X] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
[ ] Faceshield	[ ] Other	[ ] Full Face Respirator	[ ] Chemical Resistant Clothes	[ ] Enclosed Cab w/Air Purification
[ ] Eye/Sun Glasses	[X] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[X] None		[X] None	[ ] Head Covering	[X] None
			[ ] Other	

NVIRONMENTAL OR PROPERTY DAMAGE

DESCRIPTION OF DAMAGE		AMOUNT/VALUE
n/a		n/a
OWNER	**ADDRESS (Number and Street, City, State, ZIP Code)**	**PHONE**
n/a	n/a	n/a

D. ALLEGED RESPONDENT(S)

[ ] PCA [ ] DEALER [ ] PILOT [ ] GROWER [ ] AGENCY [X] OTHER Farm Labor Contractor

NAME	PHONE	LICENSE/PERMIT NUMBER	RECOMMENDATION MADE
Los Amigos Harvesting	831-768-6944	FLC000234426	[X] YES # 6649 [ ] NO

ADDRESS (Number and Street)	EMPLOYER'S NAME	PHONE
401 Hames Road	n/a	831-768-6944
City, State, ZIP Code	**EMPLOYER'S ADDRESS (Number and Street)**	
Watsonville, CA, 95076	n/a	
***EXPLAIN**	**City, State, ZIP Code**	
Farm Labor Contractor performing pest control work	n/a	

PESTICIDE NAME/MANUFACTURER	EPA REGISTRATION NUMBER	CATEGORY	DOSE/DILUTION/VOLUME	TREATMENT DATE	COMMODITY/SITE TREATED
DiPel / Valent BioSci.	73049-39	Caution	2 lbs./acre	6/29/17	Raspberry
Pristine Fungicide / BASF	7969-199	Caution	18.5 oz./acre	6/29/17	Raspberry
Rally 40WSP / Dow AgroSci.	62719-410	Caution	2.5 oz./acre	6/29/17	Raspberry

EQUIPMENT TYPE/MAKE/MODEL/DESCRIPTION: Gearmore P42N1-400G, spray rig with vertical spray nozzles

SUMMARIZE THE EPISODE INCLUDING A DETAILED DESCRIPTION OF EVIDENCE TAKEN (Use Pesticide Episode Investigation Supplemental Report form PR-ENF-127A if additional space is needed)

see report

REPORT PREPARED BY (NAME/TITLE)	DATE PREPARED	REPORT REVIEWED/APPROVED BY (NAME/TITLE)	DATE APPROVED
Shane DeVine / Ag Biologist III	April 26, 2018	David Sanford / Deputy Ag Commissioner	April 26, 2018

STATE OF CALIFORNIA

EPISODE WITNESS/INJURED/COMPLAINANT REPORT

PR ENF-127B (REV. 8/07)

DEPARTMENT OF PESTICIDE REGULATION
ENFORCEMENT BRANCH

PRIORITY INVESTIGATION	OTHER I.D. NO.	COUNTY OF OCCURRENCE	DATE OF OCCURRENCE
[X] YES # 49-SCR-17 [ ] NO	CAC #17-07	Santa Cruz	MO 6 DAY 29 YR 2017

COMPLAINT SIGNED	WAS DOCTOR VISITED	EXTENT OF INJURY/ILLNESS	ACTIVITY OF PERSON EXPOSED/INVOLVED
[ ] YES [ ] NO [X] N/A	[X] YES [ ] NO [ ] N/A	[ ] Fatal [X] Symptoms [ ] Serious [ ] Exposed Only	[ ] Mixer/Loader [X] Field Worker* [ ] Other* [ ] Applicator [ ] Public* Explain

WITNESS/INJURED/COMPLAINANT

NAME	AGE	SEX	WHS NO.	NO. OF WORKDAYS LOST
[redacted]	[redacted]	[redacted]	[redacted]	see report

ADDRESS	CITY	ZIP CODE	PHONE
[redacted]	[redacted]	[redacted]	[redacted]

MEDICAL FACILITY NAME	TREATMENT PROVIDED	HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
Watsonville Community Hospital	[X] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [X] NO	6/29/17 at 0905 hrs	6/29/17 at 1223 hrs

PHYSICIAN	ADDRESS	PHONE
see report	n/a	n/a

[X] SIGNS/SYMPTOMS EXPERIENCED
nausea, vomiting, dizziness, sore/itchy throat

EMPLOYER	ADDRESS	PHONE
FMG Farm Contractor, Inc	800 5th Street, Gonzales, CA, 93926	831-675-0007

[ ] PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[X] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
[ ] Faceshield	[ ] Other	[ ] Full Face Respirator	[ ] Chemical Resistant Clothes	[ ] Enclosed Cab w/Air Purification
[ ] Eye/Sun Glasses	[X] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[X] None		[X] None	[ ] Head Covering	[X] None
			[ ] Other	

COMPLAINT SIGNED	WAS DOCTOR VISITED	EXTENT OF INJURY/ILLNESS	ACTIVITY OF PERSON EXPOSED/INVOLVED
[ ] YES [ ] NO [X] N/A	[X] YES [ ] NO [ ] N/A	[ ] Fatal [X] Symptoms [ ] Serious [ ] Exposed Only	[ ] Mixer/Loader [X] Field Worker* [ ] Other* [ ] Applicator [ ] Public* Explain

WITNESS/INJURED/COMPLAINANT

NAME	AGE	SEX	WHS NO.	NO. OF WORKDAYS LOST
[redacted]	[redacted]	[redacted]	[redacted]	see report

ADDRESS	CITY	ZIP CODE	PHONE
[redacted]	[redacted]	[redacted]	[redacted]

MEDICAL FACILITY NAME	TREATMENT PROVIDED	HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
WorkWell Clinic	[X] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [X] NO	6/30/17 at 0850 hrs	6/30/17 unknown time

PHYSICIAN	ADDRESS	PHONE
n/a	n/a	n/a

[X] SIGNS/SYMPTOMS EXPERIENCED
nausea, vomiting, headache, achy, dizziness, eye itchiness and burning, blurred vision, itchy throat, trunk and upper extremities, cough with phlegm and shortness of breath

EMPLOYER	ADDRESS	PHONE
FMG Farm Contractor, Inc.	800 5th Street, Gonzales, CA, 93926	831-675-0007

[ ] PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[X] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
[ ] Faceshield	[ ] Other	[ ] Full Face Respirator	[ ] Chemical Resistant Clothes	[ ] Enclosed Cab w/Air Purification
[ ] Eye/Sun Glasses	[X] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[X] None		[X] None	[ ] Head Covering	[X] None
			[ ] Other	

COMPLAINT SIGNED	WAS DOCTOR VISITED	EXTENT OF INJURY/ILLNESS	ACTIVITY OF PERSON EXPOSED/INVOLVED
[ ] YES [ ] NO [X] N/A	[X] YES [ ] NO [ ] N/A	[ ] Fatal [X] Symptoms [ ] Serious [ ] Exposed Only	[ ] Mixer/Loader [X] Field Worker* [ ] Other* [ ] Applicator [ ] Public* Explain

WITNESS/INJURED/COMPLAINANT

NAME	AGE	SEX	WHS NO.	NO. OF WORKDAYS LOST
[redacted]	[redacted]	[redacted]	[redacted]	see report

ADDRESS	CITY	ZIP CODE	PHONE
[redacted]	[redacted]	[redacted]	[redacted]

MEDICAL FACILITY NAME	TREATMENT PROVIDED	HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
Watsonville Community Hospital	[X] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [X] NO	6/29/17 unknown time	6/29/17 unknown time

PHYSICIAN	ADDRESS	PHONE
n/a	n/a	n/a

[X] SIGNS/SYMPTOMS EXPERIENCED
vomiting

EMPLOYER	ADDRESS	PHONE
FMG Farm Contractor, Inc.	800 5th Street, Gonzales, CA, 93926	831-675-0007

[ ] PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[X] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
[ ] Faceshield	[ ] Other	[ ] Full Face Respirator	[ ] Chemical Resistant Clothes	[ ] Enc. Cab w/Air Purification
[ ] Eye/Sun Glasses	[X] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[X] None		[X] None	[ ] Head Covering	[X] None
			[ ] Other	

COMMENTS

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REPORT PREPARED BY (NAME/TITLE)	DATE PREPARED	REPORT REVIEWED/APPROVED BY (NAME/TITLE)	DATE REVIEWED/APPROVED
Shane DeVine / Ag Biologist III	Apr. 26, 2018	David Sanford / Deputy Ag Commissioner	Apr. 26, 2018

STATE OF CALIFORNIA

EPISODE WITNESS/INJURED/COMPLAINANT REPORT

PR-ENF-127B (REV 8/07)

DEPARTMENT OF PESTICIDE REGULATION
ENFORCEMENT BRANCH

PRIORITY INVESTIGATION	OTHER I.D. NO.	COUNTY OF OCCURRENCE	DATE OF OCCURRENCE
[X] YES # 49-SCR-17 [ ] NO	CAC #17-07	Santa Cruz	MO 6 DAY 29 YR 2017

COMPLAINT SIGNED	WAS DOCTOR VISITED	EXTENT OF INJURY/ILLNESS	ACTIVITY OF PERSON EXPOSED/INVOLVED
[ ] YES [ ] NO [X] N/A	[X] YES [ ] NO [ ] N/A	[ ] Fatal [X] Symptoms [ ] Serious [ ] Exposed Only	[ ] Mixer/Loader [X] Field Worker* [ ] Other* [ ] Applicator [ ] Public* Explain

WITNESS/INJURED/COMPLAINANT

NAME	AGE	SEX	WHS NO	NO. OF WORKDAYS LOST
[redacted]	[redacted]	[redacted]	[redacted]	see report

ADDRESS	CITY	ZIP CODE	PHONE
[redacted]	[redacted]	[redacted]	[redacted]

MEDICAL FACILITY NAME	TREATMENT PROVIDED	HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
Watsonville Community Hospital	[X] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [X] NO	6/29/17 at 0918 hrs	6/29/17 at 1257 hrs

PHYSICIAN	ADDRESS	PHONE
n/a	n/a	n/a

[X] SIGNS/SYMPTOMS EXPERIENCED: burning sensation in both eyes

EMPLOYER	ADDRESS	PHONE
FMG Farm Contractor, Inc.	800 5th Street, Gonzales, CA, 93926	831-675-0007

[ ] PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[X] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
[ ] Faceshield	[ ] Other	[ ] Full Face Respirator	[ ] Chemical Resistant Clothes	[ ] Enclosed Cab w/Air Purification
[ ] Eye/Sun Glasses	[X] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[X] None		[X] None	[ ] Head Covering	[X] None
			[ ] Other	

COMPLAINT SIGNED	WAS DOCTOR VISITED	EXTENT OF INJURY/ILLNESS	ACTIVITY OF PERSON EXPOSED/INVOLVED
[ ] YES [ ] NO [X] N/A	[X] YES [ ] NO [ ] N/A	[ ] Fatal [X] Symptoms [ ] Serious [ ] Exposed Only	[ ] Mixer/Loader [X] Field Worker* [ ] Other* [ ] Applicator [ ] Public* Explain

WITNESS/INJURED/COMPLAINANT

NAME	AGE	SEX	WHS NO	NO. OF WORKDAYS LOST
[redacted]	[redacted]	[redacted]	[redacted]	see report

ADDRESS	CITY	ZIP CODE	PHONE
[redacted]	[redacted]	[redacted]	[redacted]

MEDICAL FACILITY NAME	TREATMENT PROVIDED	HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
WorkWell Clinic	[ ] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [X] NO	6/30/17 unknown time	6/30/17 unknown time

PHYSICIAN	ADDRESS	PHONE
n/a	n/a	n/a

[X] SIGNS/SYMPTOMS EXPERIENCED: nausea, headache, throat irritation

EMPLOYER	ADDRESS	PHONE
FMG Farm Contractor, Inc.	800 5th Street, Gonzales, CA, 93926	831-675-0007

[ ] PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[X] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
[ ] Faceshield	[ ] Other	[ ] Full Face Respirator	[ ] Chemical Resistant Clothes	[ ] Enclosed Cab w/Air Purification
[ ] Eye/Sun Glasses	[X] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[X] None		[X] None	[ ] Head Covering	[X] None
			[ ] Other	

COMPLAINT SIGNED	WAS DOCTOR VISITED	EXTENT OF INJURY/ILLNESS	ACTIVITY OF PERSON EXPOSED/INVOLVED
[ ] YES [ ] NO [X] N/A	[X] YES [ ] NO [ ] N/A	[ ] Fatal [X] Symptoms [ ] Serious [ ] Exposed Only	[ ] Mixer/Loader [X] Field Worker* [ ] Other* [ ] Applicator [ ] Public* Explain

WITNESS/INJURED/COMPLAINANT

NAME	AGE	SEX	WHS NO	NO. OF WORKDAYS LOST
[redacted]	[redacted]	[redacted]	[redacted]	see report

ADDRESS	CITY	ZIP CODE	PHONE
[redacted]	[redacted]	[redacted]	[redacted]

MEDICAL FACILITY NAME	TREATMENT PROVIDED	HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
Watsonville Community Hospital	[X] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [X] NO	6/29/17 at 0906 hrs	6/29/17 at 1257 hrs

PHYSICIAN	ADDRESS	PHONE
n/a	n/a	n/a

[X] SIGNS/SYMPTOMS EXPERIENCED: nausea, shortness of breath, burning, sore and itchy throat

EMPLOYER	ADDRESS	PHONE
FMG Farm Contractor, Inc.	800 5th Street, Gonzales, CA, 93926	831-675-0007

[ ] PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[X] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
[ ] Faceshield	[ ] Other	[ ] Full Face Respirator	[ ] Chemical Resistant Clothes	[ ] Enc. Cab w/Air Purification
[ ] Eye/Sun Glasses	[X] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[X] None		[X] None	[ ] Head Covering	[X] None
			[ ] Other	

COMMENTS

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REPORT PREPARED BY (NAME/TITLE)	DATE PREPARED	REPORT REVIEWED/APPROVED BY (NAME/TITLE)	DATE REVIEWED/APPROVED
Shane DeVine / Ag Biologist III	Apr. 26, 2018	David Sanford / Deputy Ag Commissioner	Apr. 26, 2018

STATE OF CALIFORNIA

EPISODE WITNESS/INJURED/COMPLAINANT REPORT

PR-ENF-127B (REV. 8/07)

DEPARTMENT OF PESTICIDE REGULATION
ENFORCEMENT BRANCH

PRIORITY INVESTIGATION	OTHER I.D. NO.	COUNTY OF OCCURRENCE	DATE OF OCCURRENCE
[X] YES # x48-SCR 17 [ ] NO	CAC #17-07	Santa Cruz	MO 6 DAY 29 YR 2017

COMPLAINT SIGNED	WAS DOCTOR VISITED	EXTENT OF INJURY/ILLNESS	ACTIVITY OF PERSON EXPOSED/INVOLVED
[ ] YES [ ] NO [X] N/A	[X] YES [ ] NO [ ] N/A	[ ] Fatal [X] Symptoms [ ] Serious [ ] Exposed Only	[ ] Mixer/Loader [X] Field Worker* [ ] Other* [ ] Applicator [ ] Public* Explain

WITNESS/INJURED/COMPLAINANT

NAME	AGE	SEX	WHS NO	NO. OF WORKDAYS LOST
[redacted]	[redacted]	[redacted]	[redacted]	see report

ADDRESS	CITY	ZIP CODE	PHONE
[redacted]	[redacted]	[redacted]	[redacted]

MEDICAL FACILITY NAME	TREATMENT PROVIDED / OBSERVATION ONLY	HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
Watsonville Community Hospital	[X] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [X] NO	6/29/17 at 0919 hrs	6/29/17 at 1103 hrs

PHYSICIAN	ADDRESS	PHONE
n/a	n/a	n/a

[X] SIGNS/SYMPTOMS EXPERIENCED: Nausea, vomiting, sore throat

EMPLOYER	ADDRESS	PHONE
FMG Farm Contractor, Inc.	800 5th Street, Gonzales, CA, 93926	831-675-0007

PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[X] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
[ ] Faceshield	[ ] Other	[ ] Full Face Respirator	[ ] Chemical Resistant Clothes	[ ] Enclosed Cab w/Air Purification
[ ] Eye/Sun Glasses	[X] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[X] None		[X] None	[ ] Head Covering	[X] None
			[ ] Other	

COMPLAINT SIGNED	WAS DOCTOR VISITED	EXTENT OF INJURY/ILLNESS	ACTIVITY OF PERSON EXPOSED/INVOLVED
[ ] YES [ ] NO [X] N/A	[ ] YES [ ] NO [X] N/A	[ ] Fatal [ ] Symptoms [ ] Serious [ ] Exposed Only	[ ] Mixer/Loader [ ] Field Worker* [ ] Other* [ ] Applicator [ ] Public* Explain

WITNESS/INJURED/COMPLAINANT

NAME	AGE	SEX	WHS NO	NO. OF WORKDAYS LOST
n/a				

ADDRESS	CITY	ZIP CODE	PHONE

MEDICAL FACILITY NAME	TREATMENT PROVIDED / OBSERVATION ONLY	HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
	[ ] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [ ] NO		

PHYSICIAN	ADDRESS	PHONE

SIGNS/SYMPTOMS EXPERIENCED

EMPLOYER	ADDRESS	PHONE

PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[ ] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
[ ] Faceshield	[ ] Other	[ ] Full Face Respirator	[ ] Chemical Resistant Clothes	[ ] Enclosed Cab w/Air Purification
[ ] Eye/Sun Glasses	[ ] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[ ] None		[ ] None	[ ] Head Covering	[ ] None
			[ ] Other	

COMPLAINT SIGNED	WAS DOCTOR VISITED	EXTENT OF INJURY/ILLNESS	ACTIVITY OF PERSON EXPOSED/INVOLVED
[ ] YES [ ] NO [X] N/A	[ ] YES [ ] NO [X] N/A	[ ] Fatal [ ] Symptoms [ ] Serious [ ] Exposed Only	[ ] Mixer/Loader [ ] Field Worker* [ ] Other* [ ] Applicator [ ] Public* Explain

WITNESS/INJURED/COMPLAINANT

NAME	AGE	SEX	WHS NO	NO. OF WORKDAYS LOST
n/a				

ADDRESS	CITY	ZIP CODE	PHONE

MEDICAL FACILITY NAME	TREATMENT PROVIDED / OBSERVATION ONLY	HOSPITALIZED	DATE/TIME ADMITTED	DATE/TIME DISCHARGED
	[ ] TREATMENT PROVIDED [ ] OBSERVATION ONLY	[ ] YES [X] NO		

PHYSICIAN	ADDRESS	PHONE

SIGNS/SYMPTOMS EXPERIENCED

EMPLOYER	ADDRESS	PHONE

PROTECTIVE MEASURES USED

EYES	HANDS	INHALATION	OTHER	ENGINEERING CONTROLS
[ ] Safety Glasses	[ ] Cloth/Leather Gloves	[ ] Dust Mask	[ ] Work Clothes	[ ] Closed System
[ ] Goggles	[ ] Chemical Resistant Gloves	[ ] 1/2 Face Respirator	[ ] Coveralls	[ ] Enclosed Cab
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[ ] Eye/Sun Glasses	[ ] None	[ ] SCBA	[ ] Chemical Resistant Boots	[ ] Other
[ ] None		[ ] None	[ ] Head Covering	[ ] None
			[ ] Other	

COMMENTS

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REPORT PREPARED BY (NAME/TITLE)	DATE PREPARED	REPORT REVIEWED/APPROVED BY (NAME/TITLE)	DATE REVIEWED/APPROVED
Shane DeVine / Ag Biologist III	Apr. 26, 2018	David Sanford / Deputy Ag Commissioner	Apr. 26, 2018

Pesticide Illness Priority Investigation Report
Coastal Berry - North
Priority Episode #49-SCR-17
Santa Cruz County Case #17-07

Summary

On the morning of June 29, 2017, the Santa Cruz County Agricultural Commissioner's Office was notified of a possible pesticide exposure episode. Investigation of the incident revealed 24 employees of farm labor contractor FMG Farm Contractor, Inc. were harvesting raspberries for Coastal Berry - North when a pesticide application began on a neighboring field operated by Garrett Farms. Fifteen of the 24 employees experienced one or more of the physical symptoms nausea, vomiting, stomachache, headache, dizziness, difficulty breathing, high temperature, dry mouth, a bad taste in their mouth, and throat, eye and skin irritation. As a result of said symptoms, five employees were transported by ambulance to a local hospital immediately following the pesticide exposure incident, another employee arrived by private vehicle at the same hospital that same morning, and two additional employees obtained professional medical care at a local clinic the following day. Environmental sampling performed at the incident site indicates the pesticides applied at Garrett Farms moved off site and into the Coastal Berry - North field where FMG employees were working. Said application was made by an employee under the primary direction and control of farm labor contractor Los Amigos Harvesting. Coastal Berry - North, FMG Farm Contractor, Inc. and Los Amigos Harvesting were found in violation of the California Code of Regulations (CCR) and/or the California Food and Agricultural Code (FAC).

Violations (referenced regulations and laws comprise Attachments 2 and 3, respectively)

Coastal Berry - North

3 CCR 6626(a)

3 CCR 6723.1(a) and (b)

FMG Farm Contractor, Inc.

3 CCR 6764(a), (b) and (e)

3 CCR 6766(c)

Los Amigos Harvesting

3 CCR 6600(b) and (e)

3 CCR 6614

3 CCR 6626(b)

3 CCR 6702(a) and (b)(3) and (5)

3 CCR 6724(b)

FAC 11701

FAC 11732

FAC 12973

Witnesses / Contacts

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Investigation and Statements

On the morning of June 29, 2017, the Santa Cruz County Agricultural Commissioner's Office (CAC) was notified of a possible pesticide exposure incident near the intersection of Wagner and East Lake Avenues in Watsonville, California. At approximately 0910 hours while performing routine surveillance in the field I received a telephone call from the CAC office requesting I

investigate referenced incident. At 0925 hours I arrived on site and observed a large field of hoop houses northwest of referenced intersection. Said field was comprised of numerous individual lots of hoop houses and one lot without hoop houses near the center, all of which appeared to contain raspberry plants. Review of CAC records indicates referenced field was occupied by two different growers: Coastal Berry - North and Garrett Farms, California Restricted Material Permit numbers 44-17-27P192A and 44-17-440168A, respectively (Attachment 4 and 5, respectively). A wide earthen service road running north to south separates the two growers' fields with Coastal Berry - North (also referred to as "Dole Fresh Foods") site 21A Bronson Ranch of 42 acres on the west side of said road, and Garrett Farms site 1A Nugent Ranch of 66.4 acres to the east. Weather on site was overcast with little to no wind.

Moments after my arrival I encountered Jose Ramirez, Authorized Representative for Coastal Berry - North. With J. RAMIREZ were Dole Fresh Foods Caneberry Manager Freddy Yanez and Coastal Berry - North Supervisor David Vasquez. I informed said men I was investigating a possible pesticide exposure incident. In response to my questions, J. RAMIREZ stated the following in summary.

> I just happened to be at our site 21A Bronson Ranch this morning. When I arrived the fire department and ambulances were already here. The fire department was washing down some of the FMG fieldworkers with a hose. FMG Farm Contractor is a farm labor contractor we hire for picking berries. I did not talk directly with employees of FMG or neighboring Garrett Farms nor did I see Garrett Farms making a pesticide application. It was from my staff on site I learned Garrett Farms made a pesticide application in their open raspberry field directly across the service road from where the FMG fieldworkers were working. There is a shade house on the side of the service road and next to our field where FMG employees were stacking their flats of raspberries upon a harvesting trailer. I understand the incident occurred around 8:00 a.m. Five FMG employees were taken to the hospital. Apparently the Garrett Farms applicator was told to stop the application when the fieldworkers started getting sick, but I do not know who told him to stop. FMG employees are no longer on site. One of our employees was washing off one of our application spray rigs this morning, but we did not make a pesticide application today. We made a pesticide application to our site 21A, block #8, yesterday with a start time of 8:15 p.m. and finish time of 9:30 p.m. This morning FMG employees were working in block #7, which is southwest of block #8.

In response to my questions, F. YANEZ stated the following in summary.

> I have been Caneberry Manager for Dole Fresh Foods for the past two years. Coastal Berry - North is one of our local growing operations. Earlier this morning I received a telephone call from David Vasquez, Supervisor with Coastal Berry - North, informing me FMG employees at their site 21A Bronson Ranch had become ill as a result of exposure to a pesticide applied by neighboring Garrett Farms. Approximately 10 minutes later I arrived on site and was provided additional information regarding the incident by Supervisor Vasquez. By this time the pesticide application had stopped and the fire truck and ambulances had already left to take the sick fieldworkers to Watsonville Hospital. I noticed a slight breeze coming from the Garrett Farms ranch toward our Bronson Ranch. I did not know Garrett Farms would be applying pesticides this morning and did not notice if their field was posted with pesticide application signs. The fruit harvested by FMG may

> have been contaminated with pesticide so I had it destroyed. I instructed staff on site not to allow anyone to enter the lot where FMG employees were working until the restricted entry intervals for the materials applied had expired.

Spanish speaking D. VASQUEZ was not interviewed at this time but interviewed later on July 5, 2017 (see below).

After speaking with Coastal Berry - North and Dole Fresh Foods personnel I drove north along the service road that separates Coastal Berry - North and Garrett Farms and saw no FMG employees or a pesticide application. I drove through the Garrett Farms field and at approximately 0945 hours arrived at their business office near the southeast end of the field, informed office personnel of my investigation and was referred to Garrett Farms Authorized Representative Morgan Tittle. At 0950 hours I telephoned M. TITTLE who in response to my questions stated the following in summary.

> I was not at our site 1A Nugent Ranch this morning but spoke with our onsite Supervisor Jose Resendiz who said a pesticide application was made to our open field of raspberries, that is Driscoll Lot #9863. Prior to making the application our employee pesticide handler Melchor Galvan spoke with fieldworkers in the neighboring Coastal Berry - North field and informed them he would be making a pesticide application. After the fieldworkers moved to the other side of their field, further away from our site 1A, pesticide handler Galvan began the application starting 15 rows, approximately 30 feet, back away from the service road that separates our field from that of Coastal Berry - North. The rows in that open raspberry field run parallel to the service road. The application started at 8:00 a.m. and lasted only 5 minutes or so before Supervisor Resendiz received a call from Coastal Berry - North indicating their fieldworkers in the neighboring field were getting sick. Immediately thereafter Supervisor Resendiz proceeded to the application area and instructed pesticide handler Galvan to stop the application. The pesticides applied this morning were DiPel DF, Pristine Fungicide, Rally 40WSP, and Widespread Max. I will e-mail to you the application recommendation that lists the pesticides and their EPA Registration Numbers.

Records indicate M. TITTLE has valid Private Applicator Certificate #PA-SCR-0884, issued by the Santa Cruz CAC, with expiration date December 31, 2017.

After my telephone conversation with M. TITTLE I continued to drive through Garrett Farms site 1A looking for evidence of a pesticide application. Just north of the open raspberry field I observed a pesticide application rig parked across a service road between two lots of Garrett Farms hoop houses. A wooden post at the west end of said service road had the markings "A13B" (Attachment 26, photo #6). This service road is perpendicular to the larger service road that separates the Coastal Berry - North and Garrett Farms ranches. Said rig was unattended and no pesticide containers were observed in the vicinity. After taking photographs of said rig (Attachment 26, photos 2, 3 and 4), I proceeded back to the area of the purported pesticide exposure incident and began taking photographs of same (Attachment 26, photos 1, 8, 10, 11, and 12). Santa Cruz County Agricultural Commissioner Juan Hidalgo was informed of the possible pesticide exposure incident and arrived on site. After briefing J. HIDALGO on my investigative findings, we proceeded to the Coastal Berry - North equipment yard at the south end of their site 21A. Coastal Berry - North employees at said yard indicated they had no knowledge of the purported pesticide exposure incident. J. HIDALGO and I then proceeded north along a service

road that bisects Coastal Berry - North site 21A whereupon we encountered fieldworkers harvesting raspberries in a lot to the west of said road. Speaking in Spanish, J. HIDALGO interviewed the crew foreman Mr. Hilario Ramirez who stated they were Coastal Berry - North employees and they had no knowledge of the purported pesticide exposure incident. J. HIDALGO and I then proceeded to Watsonville Community Hospital, Watsonville, California where FMG employees were taken that were exhibiting physical symptoms of pesticide exposure reportedly as a result of referenced incident.

Upon arrival at Watsonville Community Hospital Emergency Room (ER) J. HIDALGO and I spoke with Mr. Brian Stevens, RN, Director of ER Nursing. B. STEVENS indicated six individuals were seen at the ER that morning complaining of pesticide exposure. All six were part of the purported pesticide exposure incident under investigation. Five of the individuals arrived by ambulance and one by some other means. Of the six individuals, three were still at the ER: [redacted] J. HIDALGO, speaking in Spanish, obtained a statement and signed Medical Information Authorization form from [redacted] while I did the same with both [redacted] and [redacted] Summaries of statements made by [redacted] and [redacted] appear hereinafter.

Upon return to the CAC office, J. HIDALGO and I concurred the purported pesticide exposure incident warranted environmental sampling. Environmental Specialist Francisco Leon of the California Department of Pesticide Regulation (DPR) was consulted regarding environmental sampling and a raspberry plant foliar 'five point gradient' sampling plan was deemed most applicable. Said sampling plan is defined in DPR's *Pesticide Use Enforcement Program Standards Compendium, Volume #5, Investigation Procedures.*

On this same date, Agricultural Biologist Alberto Vinuela and I gathered all necessary sampling equipment and supplies and proceeded to Coastal Berry - North site 21A to execute referenced sampling plan. Once on site, calculations were made to establish individual sampling points at specific distances along a transect orientated longitudinally between neighboring raspberry plant rows identified as "5B" and "A6" at Coastal Berry - North site 21A, and projecting through the shade house, across the service road and into the Garrett Farms open raspberry field (Attachment 26, photo 11 and 12). A 300 foot tape measure and Bushnell Scout 1000 ARC Laser Rangefinder were used to measure sampling point locations along said transect. As each sampling point was located it was marked with an irrigation flag. Sample collection started at 1539 hours. The first sample collected was sample number 1 taken on the west end of said transect and farthest from the pesticide application area. Samples number 2 through 5 were taken in numerical order proceeding west to east along referenced transect at predetermined locations. Each of the five samples was comprised of approximately one and one-half pounds of raspberry plant leaves collected from plants along the south side of aforesaid row identified as "A6" and the north side of row "5B" (Attachment 26, photo 11 and 12). Leaves were taken from plants along referenced rows up to approximately 12 feet in either direction from the measured sampling point and at various heights above the ground. Leaves collected at a single sampling point were deposited in a separate large brown paper bag, said bag folded closed, labeled with a unique identification code number and then placed in a large plastic bag. The open end of the outer plastic bag was twisted shut and secured by tying it in a knot. After each sample was bagged, it was placed in a large insulated ice chest containing seven packets of "blue ice," with each packet weighing approximately 20 ounces. Clean latex gloves were donned prior to the collection of each sample. While on site a map/diagram was made to illustrate the location of the individual sample collection points

(Attachment 15). After collection of all samples, A. VINUELA and I returned to the CAC office where said samples were placed in a refrigerator for storage at 1850 hours.

After further consideration of the sampling plan, it was determined an additional foliar sample should be taken along aforementioned transect and at the edge of the Coastal Berry - North field adjacent to the service road and shade house (Attachment 15). This sixth sample was taken on July 1, 2017, at 0835 hours by A. VINUELA. Said sample was collected using the same protocol as used with the five samples referenced heretofore. The sample collected at sample site number 6 was deposited in the CAC refrigerator for storage on this same date at 0955 hours.

On June 30, 2017, at 0945 hours, [redacted] foreman of the FMG crew working at Coastal Berry - North site 21A when the purported pesticide exposure incident occurred, sent an e-mail to J. HIDALGO along with a list of the 24 FMG employees present during said incident (Attachment 20). An alphabetized and annotated version of referenced list was generated to facilitate clarity (Attachment 20). Of the 24 employees, eight obtained professional medical care due to physical symptoms they experienced as a result of the purported pesticide exposure incident on June 29, 2017. Over time, the entire crew was interviewed, excepting Miguel Jimenez who could not be contacted. Summaries of statements made during said interviews appear hereinafter.

On this same date, at 0950 hours, Vanessa Ruiz of FMG Farm Contracting, Inc. telephoned our office and requested Safety Data Sheets (SDS) for the pesticides their employees were purportedly exposed to while working at Coastal Berry - North site 21A on the morning of June 29, 2017. The SDSs requested were e-mailed to V. RUIZ at 1130 hours this same date.

On this same date, at 1146 hours, I contacted by e-mail the Label Resource Center of DPR, Pesticide Registration Branch, and requested registered labels for pesticides applied to Garrett Farms site 1A Nugent Ranch on June 29, 2017, i.e., pesticides DiPel DF, Pristine Fungicide, Rally 40WSP, and Widespread Max. On this same date, at 1206 hours, I received said labels by e-mail.

On this same date, at 1331 hours, I spoke by telephone with M. TITTLE who conveyed additional information pertinent to the purported pesticide exposure incident on June 29, 2017. M. TITTLE stated the following in summary.

> Our pesticide application at site 1A on the morning of June 29th lasted only 5 minutes. We stopped the application once we were notified fieldworkers in the neighboring Coastal Berry - North field were reportedly experiencing symptoms of pesticide exposure. We resumed the application at 6:00 p.m. that evening when no one was present. Information on the Weather Underground website indicates there was no wind that morning. Ninety percent of the time winds in that area are from west to east, blowing from the Coastal Berry - North field toward our field. One of our employees on site that morning observed pesticide application signs posted at the Coastal Berry - North field and one of their employees rinsing off a pesticide application rig. Perhaps Coastal Berry - North made a pesticide application that morning as well.

On this same date, at 1425 hours, I spoke by telephone with Division Chief Rudy Lopez of the Watsonville Fire Department. In response to my questions R. LOPEZ stated the following in summary.

> I do not at present have the time our crew arrived on scene, but the reported incident occurred at approximately 8:30 a.m. on June 29th. Reportedly a crew of 25 [*sic*] fieldworkers was exposed to a spray fungicide. The captain on scene made contact with the one sick patient. An additional four people became sick while we were on scene. The fieldworker supervisor provided a material information sheet indicating the fungicide was water soluble. The workers were removed from the hazardous area and given gross decon, that is washed down with water for a few minutes. Two AMR ambulances, that arrived on scene the same time we did, took the patients to the hospital; three patients in one ambulance and two patients in the other. You may obtain a copy of our incident report by contacting Fire Department Analyst Rosa Meyer at (831)768-3209. Reference #FD016052 when requesting the report.

On this same date, at 1453 hours, I telephoned Fire Department Analyst Rosa Meyer and in a voicemail message identified myself and requested a copy of Watsonville Fire Department's incident report #FD016052 regarding the purported pesticide exposure incident on June 29, 2017.

On this same date (and on dates indicated below), A. VINUELA, speaking in Spanish, interviewed in person all eight FMG employees that obtained professional medical care due to physical symptoms they experienced as a result of the purported pesticide exposure incident on June 29, 2017. The following summaries of FMG employee interview statements include information obtained during the interviews conducted by J. HIDALGO and myself with the three FMG employees at Watsonville Community Hospital on the morning of June 29, 2017.

Date of interview: July 3, 2017
Subject: [redacted]
Interviewer: A. VINUELA

> I have been an employee of FMG for one and one half months. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. A pesticide applicator from the neighboring ranch came to the harvesting trailer where we were working and asked how long we would be there. He told us to let him know if we began to smell his pesticide application. He started spraying the first row of plants along the service road, about 30 to 40 feet away. When he finished that row, he shut off his tractor spray rig, came back to where he started and continued the application down the first aisle. I didn't know what he was spraying, but I saw the mist drifting toward us and there was a bad odor in the air. After about five or ten minutes I experienced stomachache, vomiting and a bad taste in my mouth. I told my supervisor about my symptoms. She told everyone to go to the other side of the field. I couldn't tell if the application stopped because I was on the other side of the field. I was taken to the hospital by ambulance. I have had headaches since the exposure and missed a couple days work. I received fieldworker safety training from FMG before starting work. Decontamination facilities were available in the field and I used them to wash my face. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented if the supervisor of the other field would have notified the supervisor of Coastal Berry - North.

Date of interview: June 29, 2017 and June 30, 2017
Subject: [redacted]
Interviewer: Shane DeVine (June 29, 2017) and A. VINUELA (June 30, 2017)

I have been an employee of FMG for one year. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was one of 24 fieldworkers harvesting fruit. I was the crew foreman. Three of us were at the harvesting trailer under the shade house where we collect fruit and punch the fieldworker's cards. Sometime around 8 to 8:30 a.m. a pesticide applicator from the neighboring field came to us and asked how long we would be working in that area. I told him we would be there about 45 minutes to an hour. He said he had to start a pesticide application and asked us to say something if we felt the pesticide spray. He started the application right in front of us on the edge of the neighboring ranch just across the service road, about 30 feet away, spraying the plants on his right. The spray rig was a tractor with two or three spray tubes on the side. We immediately saw the pesticide drifting toward us. It was overcast and the wind was not blowing constantly, but some gusts were blowing in our direction. We were exposed to the pesticide. Even the trailer table was wet with pesticide. One crew member started vomiting then others started complaining of itchy eyes and nausea. I told the entire crew to get back and to move to the opposite side of the block, I honked the truck's horn and after everyone had moved to the other side of the block I moved the truck and trailer. I called David the Dole supervisor, Ignacio Quiroz my supervisor at FMG and 911. The applicator didn't stop the application. I didn't know what he was spraying, but there was a strong odor. I got pesticide on my skin and clothes. After about 10 minutes firefighters came to the field, showered some of us and then we were taken to the hospital. [redacted] and I went in one ambulance and [redacted] and [redacted] in another ambulance. After the inciden[redacted] went home, began feeling ill and his relative drove him to the hospital. A total of six people went to the hospital and all of us were released a few hours later. [redacted] and [redacted] came to work the next day, but they were feeling sick so they were sent to Mar Monte Clinic. [redacted] went back to the hospital the day after the incident. Immediately after the pesticide application started I experienced stomachache, nausea, throat irritation and was vomiting. I am still experiencing stomach discomfort and dizziness today. I received fieldworker safety training from FMG this year. We always have decontamination facilities in the field, but I didn't use them that morning. I knew the location of the emergency medical facility where I was to go to receive care if needed. Should a medical facility not be reasonably accessible from where I am working the procedure is to call 911 and my supervisor if I need care. The PSIS A-9 is in a binder and the Application-Specific Information was on the Coastal Berry - North ranch board. I do not know if the Safety Data Sheets were with the Application-Specific Information. I believe this incident could have been prevent if we would have been informed of the scheduled pesticide application.

Date of interview: July 3, 2017
Subject: [redacted]
Interviewer: A. VINUELA

I have been an employee of FMG for one month. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I saw a tractor applying pesticide to the plants on the first row inside the block in front of us. I didn't know what

they were applying, but there was a very bad odor. I saw the spray coming toward us, it was only 30 or 40 feet away. Right after the application began I experienced eye irritation, headache, itching on my hands, dizziness, nausea and vomiting. Our foreman told everyone to go to the other side of the block. The pesticide applicator didn't stop the application. I did not go to the hospital the day of the exposure incident, but went the following day to the clinic. I'm almost well now, kind of sleepy and still have some itching. Today I went to the clinic again for a follow-up. I have not received fieldworker safety training within the past year. Decontamination facilities were available in the field and I used them to wash my hands. Mar Monte Clinic was where we were to go to receive emergency medical care if needed. When a medical facility is not reasonably accessible from where I am working the procedure is to inform my foremen if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe communications and meetings explaining general rules could have prevented this incident.

Date of interview: June 29, 2017 and July 5, 2017
Subject: [redacted]
Interviewer: S. DEVINE (June 29, 2017) and A. VINUELA (July 5, 2017)

I have been an employee of FMG since last May. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was coming out from the row I was harvesting in and saw the pesticide applicator. He was driving his spray rig, a tractor with tubes, through the third row in the block in front of us, approximately 60 feet away. I didn't know what he was applying, but I could smell it and I saw the spray cloud drifting toward us because of the breeze. I experienced throat and eye irritation and was vomiting. The crew foreman could see people getting sick, so she moved the crew to the other side of the lot away from the pesticide application. After we moved I saw the foreman vomiting and other people getting sick. I don't think the applicator stopped the application, but I'm not sure because we were told to go to the other side of the block. I went home after the incident, took a shower, but didn't feel well so my sister drove me to the hospital. I feel alright now, but I'm still using eye drops. I received fieldworker safety training before starting work. Decontamination facilities were available in the field, but I didn't use them. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was aware of the PSIS A-9's location, but not where the grower's pesticide use records were nor where the Application-Specific Information was. I believe such an incident could have been prevented if notification were given before applying pesticides when people are working nearby.

Date of interview: June 29, 2017 and July 3, 2017
Subject: [redacted]
Interviewer: J. HIDALGO (June 29, 2017) and A. VINUELA (July 3, 2017)

I have been an employee of FMG for one month. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. Sometime around 8:30 to 8:40 in the morning I sensed a very strong and bad odor. I could see the application tractor about 30 or 40 feet away from us. I didn't know what was being applied, but I saw a cloud of pesticide. The weather was overcast and there was a slight wind, but I don't remember in what direction. About five minutes after the application started my eyes became irritated. My eyes were burning and

itching for about an hour. I informed the foreman of my symptoms. She was warning everyone about the exposure, honking the horn of the truck and telling us to go to the other side of the field. They kept applying the pesticide. I was taken to the hospital that morning by ambulance. The day after the incident I went to work, but decided to go back home because I wasn't feeling well, I had a headache. I received fieldworker safety training before the season began. Decontamination facilities are always in the field, but I didn't use them that morning. I washed my eyes using my own water. My employer did not inform me of the location of an emergency medical facility where I could go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented if the other company would have notified our foreman.

Date of interview: July 3, 2017
Subject: [redacted]
Interviewer: A. VINUELA

I have been an employee of FMG for two or three weeks. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I saw a tractor about 30 to 40 feet away applying pesticide to the plants along the service road on the outside of the block in front of us. After about five minutes my throat became irritated, I was nauseous and had a headache. The foreman told everyone to go to the other side of the block. I didn't know what was being applied, but I sensed a bad odor and could see the mist coming toward us. I don't know how long the application lasted, for the crew was moved to the opposite side of the block and I couldn't see. My symptoms lasted all day, but I didn't go to the hospital. The day after the exposure incident I went to work, but wasn't feeling well so I was told to go the clinic. I received fieldworker safety training before starting work. Decontamination facilities are always in the field and I used them that morning to wash myself. My employer informed me of the location of an emergency medical facility where I could go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I knew the location of the PSIS A-9, but not where the grower's pesticide use records were located nor where the Application-Specific Information was. I believe the incident could have been prevented by notification prior to the application or by making applications at night.

Date of interview: July 5, 2017
Subject: [redacted]
Interviewer: A. VINUELA

I have been an employee of FMG since last May. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was working on the table at the harvesting trailer with our foreman when a pesticide applicator came to us and asked if we would be staying in the area. The foreman said yes. He started to apply pesticides on the corner of the field in front of us, proceeded along the first row of plants by the service road and toward where we were. He was probably 40 to 50 feet away. I didn't know what was being applied, but I smelled a very bad odor and saw the mist coming toward us. Right after the application started I experienced throat irritation, a bad taste in my mouth, nausea and my face itched. I did not inform the foreman of my symptoms. She was already aware of the exposure and told everyone to go to the other side of the field. I don't know how long the application lasted. I was taken by ambulance to the hospital that morning. I went back to the hospital the following day because I

felt nauseous. I was feeling sick until Tuesday, July 4th. I feel fine now, but will go to the clinic for a follow-up this Friday. I received fieldworker safety training from my employer before the season started. Decontamination facilities were at the field and I used them to wash my face. My employer informed me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. The PSIS A-9 was in the truck, but I was not informed where the grower's pesticide use records were nor the location of the Application-Specific Information. I believe the incident could have been avoided if the fieldworkers and the pesticide applicator had reached an agreement before applying the chemicals.

Date of interview: July 3, 2017
Subject: [redacted]
Interviewer: A. VINUELA

I have been an employee of FMG since last May. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I came out of the row I was picking in and saw the applicator applying pesticide by the service road in the block right in front of us. He was approximately 30 feet away. I didn't know what was being applied, but there was a very bad odor and I could see the mist coming toward us. Soon after the application started I began to experience a bad taste in my mouth, excess saliva, vomiting and difficulty breathing. I told the foreman about my symptoms. She told everyone to move to the other side of the block. I didn't see the pesticide application stop. My difficulty breathing stopped after I was showered by the firefighters in the field. I was taken by ambulance to the hospital where I was showered again. Later that afternoon I had a headache and high temperature. I still feel a little weak and sore, like when you have a flu. Before starting work I received fieldworker safety training. Decontamination facilities were available in the field and I used them that morning to wash my hands. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented by communication between the two supervisors. The applicator, after seeing the people working nearby, should not have applied the pesticide.

On this same date, June 30, 2017 (and on dates indicated below), A. VINUELA, speaking in Spanish, interviewed 15 FMG employees (14 in person and one by telephone) that were present when the purported pesticide exposure incident occurred, yet who did not seek professional medical care. (FMG employee M. JIMENEZ was also present during referenced incident but could not be contacted for an interview.)

Date of interview: July 3, 2017
Subject: Albor, Ricardo
Interviewer: A. VINUELA

I have been an employee of FMG since last May, 2017. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was working in the hoop house tunnel and didn't see the application. I just heard people talking about it. Our foreman told everyone to go to the other side of the block. I didn't experience any symptoms during the incident. When I arrived home that afternoon I began feeling throat irritation and itching on my

face. The next day I felt fine. I received fieldworker safety training within the past year. Decontamination facilities were available in the field, but I didn't need to use them. My employer informed me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman or call 911 if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented if advance notification were given.

Date of interview: June 30, 2017
Subject: Avila, Angel
Interviewer: A. VINUELA

I started working for FMG on June 28th. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I saw a tractor 30 or 40 feet away applying pesticide in the field in front of us. I didn't know what they were applying, but I could see the mist. I can't say if it was drifting or not. I didn't experience any symptoms of pesticide exposure. The crew foreman told us to get out of the field on the other side. I don't know if the application ever stopped. I received fieldworker safety training before the start of work. Decontamination facilities were available in the field, but I didn't need to use them. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented through communication and taking care of people working in the fields.

Date of interview: June 30, 2017
Subject: Beristain, Brian
Interviewer: A. VINUELA

I started working for FMG one month ago. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I saw a tractor applying pesticide in the block in front of us. He was more than 100 feet away. I didn't see any pesticide mist drifting, nor did I experience pesticide exposure. The crew foreman told everyone to get out of the block on the other end. The applicator didn't stop the application. I received fieldworker training before starting work. Decontamination facilities were available at the field, but I did not need to use them. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented through advance notification.

Date of interview: July 3, 2017
Subject: Camarillo, Carlos
Interviewer: A. VINUELA

I started working for FMG one week ago. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I saw a tractor spraying pesticide along the service

road outside the block in front of us. The applicator was 30 to 40 feet away from us. I didn't know what was being applied, but there was a bad strange odor. I could see the pesticide mist drifting to where we were working. The wind was blowing toward us. Our foreman told everyone to get out of the block on the opposite end. I didn't experience any symptoms until one half hour after the incident. I was dizzy and had a dry mouth. My symptoms lasted about two or three hours. I am not sure if the applicator stopped the application, for I moved to the other side of the block and couldn't see. I have not received fieldworker safety training, I only started working one week ago. Decontamination facilities were at the field, but I didn't use them. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I did know the location of the PSIS A-9, but not where the grower's pesticide use records were nor the location of the Application-Specific Information. I believe the incident could have been prevented through advance notification.

Date of interview: July 3, 2017
Subject: Camarillo, Isabel
Interviewer: A. VINUELA

I have been an employee of FMG since the middle of May this year. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. A tractor started to spray the plants in the block in front of us. It was applying pesticide along the service road and then changed direction and continued inside the first row of plants. The application was 30 or 40 feet away from us. I didn't know what he was applying, but I could see the mist. About five minutes after the application started I got a headache, it only last for another five minutes. I reported my exposure symptom to the foreman, who was telling everyone to move to the other side of the field. I could hear the application for a while, but from the other side of the block I couldn't tell if he stopped. I received fieldworker safety training before starting work. Decontamination facilities were at the field and I used them to wash my hands. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented had the two supervisors communicated with each other.

Date of interview: June 30, 2017
Subject: Camarillo, Ramiro
Interviewer: A. VINUELA

I have been an employee of FMG for the last two months. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I saw a tractor spraying approximately 40 feet away from us. I didn't know what he was spraying and didn't see any mist or experience any exposure symptoms. Our foreman told us to go to the other side of the field. The applicator didn't stop spraying. I received fieldworker safety training two or three weeks ago. Decontamination facilities were at the field, but I didn't use them that morning. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS

A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented by the applicator giving advanced notice.

Date of interview: June 30, 2017
Subject: Garcia, Daniel
Interviewer: A. VINUELA

I have been an employee of FMG for the last two months. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was harvesting in the middle of my row and could see the tractor spraying pesticide along the edge of the neighboring field. I didn't know what was being sprayed and didn't see any mist. About five or ten minutes after the application started I experienced eye irritation. Ten minutes later I was fine. I told the foreman about my exposure symptom. She was telling everyone to get out of the block on the other side of the field. She contacted the supervisor and the ambulances. I believe they stopped the application after spraying two or three more rows. I received fieldworker safety training two weeks ago. Decontamination facilities were at the field, but I used the water I had with me to flush my eyes. My employer informed me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented by educating applicators and harvesting crews.

Date of interview: June 30, 2017
Subject: Garcia, Graciela
Interviewer: A. VINUELA

I have been an employee of FMG for one year. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I saw a tractor applying pesticide approximately 40 feet from us. I didn't know what was being applied, but I saw the mist coming toward us. I didn't experience any pesticide exposure; I was working in the middle of the row and I had my nose and mouth covered. The crew foreman told us to go to the other side of the field and harvesting was stopped. The applicator didn't stop the application. I received fieldworker safety training three weeks ago. Decontamination facilities were at the field, but I didn't need to use them. My employer informed me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I knew the location of the PSIS A-9, but not where the grower's pesticide use records were nor where the Application-Specific Information was. I believe the incident could have been prevented by giving us advance notice or making applications at night or during non-work hours.

Date of interview: June 30, 2017
Subject: Jimenez, Guillermo
Interviewer: A. VINUELA

I have been an employee of FMG for one month. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was working on the edge of the field and saw an applicator applying pesticide approximately 45 feet away. I didn't know what was being applied, but I could see the fine mist coming to where we were at. About 15 minutes after the

application started I experienced eye irritation, but it only lasted for a couple minutes. I informed the foreman of my eye irritation. The foreman was taking care of everyone in the field. The applicator didn't stop the application. I received fieldworker safety training two weeks ago. Decontamination facilities were available at the field and I used the water to flush my eyes. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented through notification and by not applying pesticides when people are nearby.

Date of interview: June 30, 2017
Subject: Jimenez, Sinay (interviewed in English)
Interviewer: A. VINUELA

I started working with FMG three weeks ago. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was harvesting in my row inside the tunnel and didn't see the pesticide application or experience any exposure symptoms. Our crew foreman told everyone to go to the other side of the field. I have received fieldworker safety training within the past year. Decontamination facilities were available at the field, but I didn't need to use them. My employer informed me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I knew the location of the PSIS A-9, but not where the grower's pesticide use records were nor where the Application-Specific Information was.

Date of interview: June 30, 2017
Subject: Lopez, Jesus
Interviewer: A. VINUELA

I have been an employee of FMG for one and one half months. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was harvesting in the middle of a row and saw a tractor applying pesticide 30 to 40 feet away. I didn't know what was being applied, but there was a bad odor and I could see the mist when I came to the edge of the field to get a box. I didn't experience any pesticide exposure symptoms. I heard people saying the foreman wanted us to move to the other side of the field. The applicator didn't stop the pesticide application. I received fieldworker safety training two weeks ago. Decontamination facilities were at the field, but I didn't need to use them. My employer informed me Watsonville Hospital was where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented by making the application when no one was around.

Date of interview: July 27, 2017
Subject: Nunez, Celestino (interviewed by telephone)
Interviewer: A. VINUELA

I have been an employee of FMG for two months. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. Around 8 or 8:30 a.m. I was in my row in the field harvesting berries when I heard a tractor and its spray pump. At one point I came up to the harvesting trailer and saw the pesticide spray rig 30 or 40 feet away making an application along the service road next to the block right in front of us. I didn't know what he was applying, but there was an odor and I could see the pesticide mist. Right after the application started I got a headache that lasted for the rest of the day. I informed our foreman of my headache. She told everyone in the crew to move to the other side of the field. I don't know if the application stopped, for we had moved to the other side of our block. I have received fieldworker safety training within the past year. Decontamination facilities were available at the field, but I didn't use them. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was not told the location of the PSIS A-9, the grower's pesticide use records nor where the Application-Specific Information was. I believe the incident could have been prevented through communication between the two supervisors. With no communication there is no control.

Date of interview: June 30, 2017
Subject: Padilla, Cristina
Interviewer: A. VINUELA

I have been an employee of FMG for one year. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was setting the crew into the rows for harvesting when the person on the pesticide spray rig came and talked with the crew foreman. He then started the application about 60 feet away along the first row of plants across the service road. I didn't know what he was applying, but I could see the pesticide drifting toward us. There was a bad strong odor and I felt the pesticide on my clothes. The foreman asked me to help her tell people to move to the other side of the field. The foreman was taking care of the most affected workers. About ten minutes later I developed a headache, stomachache, nausea and my arms were itching. I informed the foreman of my symptoms. I'm still having some stomach discomfort and headache. I don't know how long the pesticide application lasted. I have received fieldworker safety training within the past year. Decontamination facilities were at the field, but I didn't use them. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was told the PSIS A-9 was in the binder, but was not informed where the grower's pesticide use records were nor where the Application-Specific Information was. I believe the incident could have been prevented through advance notification.

Date of interview: July 3, 2017
Subject: Rincon, Christina
Interviewer: A. VINUELA

I started working for FMG one and one half months ago. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was harvesting inside the tunnel in the middle of my row and only heard the pesticide tractor. I didn't see it. I didn't experience any pesticide exposure symptoms. The foreman honked the truck

horn and told everyone to move to the other side of the field. I received fieldworker safety training before starting work. Decontamination facilities were at the field, but I didn't need to use them. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was told the location of the PSIS A-9, but not where the grower's pesticide use records were nor where the Application-Specific Information was.

Date of interview: July 3, 2017
Subject: S. SANCHEZ
Interviewer: A. VINUELA

I have been an employee of FMG since last May. I was working at the Coastal Berry - North ranch in Watsonville on the morning of June 29, 2017. I was harvesting inside the tunnel on the other side of the row and didn't see the pesticide application equipment or the application. I didn't experience any symptoms of pesticide exposure. My mother, a fellow crewmember, told me to go to the other side of the field. I received fieldworker safety training within the past year. Decontamination facilities were at the field, but I didn't use them. My employer did not inform me of the location of an emergency medical facility where I should go to receive care if needed. When no medical facility is reasonably assessable from where I am working the procedure is to inform my foreman if I need medical care. I was told the PSIS A-9 was on the board, but was not informed where the grower's pesticide use records were nor where the Application-Specific Information was.

On July 3, 2017, at 1025 hours, A. VINUELA, speaking in Spanish, interviewed in person Garrett Farms employee pesticide handler Melchor Galvan. (Santa Cruz CAC Deputy Agricultural Commissioner David Sanford was on site nearby but did not participate in said interview.) In response to A. VINUELA's questions M. GALVAN stated the following in summary.

I have been an employee of Garrett Farms for six or seven years. I am a pesticide applicator and drive trucks and other equipment. My supervisors are Jose Resendiz and Morgan Tittle. On the morning of June 29th I applied pesticides Pristine, Rally and DiPel at our Nugent Ranch using an air blast spray rig with three nozzles on each side. Supervisor Resendiz helped me with the pesticide mix and load and posting of the field with pesticide application signs. Before starting the application I spoke with a couple women working at a nearby harvesting trailer. I told the women I would be making a pesticide application, but would keep a safe distance and asked them to signal me if they smelled something. The fieldworkers moved their truck and harvesting trailer to the northern corner of the block they were working in after I started the application, which was sometime around 7:30 to 8:00 a.m. I started the application 12 rows into our field and away from the Coastal Berry - North field. There was no wind at all. I made the application row by row proceeding eastward. About 20 minutes later Supervisor Resendiz came and told me to stop the application because there was a problem with the fieldworkers in the neighboring field. One got sick. I had applied pesticides to 21 rows by the time Supervisor Resendiz told me to stop. Supervisor Resendiz then told me to continue the application two blocks to the north, further away from the fieldworkers. I continued the application in that area for approximately half an hour to another 40 rows before Supervisor Resendiz came and told me to stop the application for the day. Later

> that evening we finished the application to the first 12 rows of the block we originally started in that morning. I do not know why the fieldworkers got sick. The pesticide application was not drifting on them; there was only a light breeze and it was blowing in the opposite direction, away from them. The fieldworkers should not have started harvesting because our field was posted with pesticide application signs. I didn't see a fire truck or ambulance that morning.

After interviewing M. GALVAN, A. VINUELA measured the distance from the western edge of the Garrett Farms Nugent Ranch, immediately across the service road from the Coastal Berry - North field where the fieldworkers were working, to the 12th row where M. GALVAN said he started the application. Said distance was 87 feet.

On this same date, at 1105 hours, A. VINUELA, speaking in Spanish, interviewed in person Garrett Farms Supervisor Jose Resendiz. (D. SANFORD was on site nearby but did not participate in said interview.) In response to A. VINUELA's questions J. RESENDIZ stated the following in summary,

> I am an employee of Los Amigos Harvesting and my job title is Supervisor. I am Morgan Tittle's assistant at Garrett Farms. I supervise pesticide applicators and tractor and truck drivers. On June 28th Mr. Tittle and I scheduled a pesticide application for the Nugent Ranch for the following day, so I posted the field with pesticide application signs. I was at the Nugent Ranch on the morning of June 29th and helped mix and load pesticides Pristine, Rally, DiPel and Widespread Max into our spray rig. The rig's side nozzles were operational, but the large application cone on top was not. I noticed fieldworkers and a harvesting trailer under the shade house at the adjacent Coastal Berry - North field. The fieldworkers were about 30 to 40 feet away from the lot where we were going to make the pesticide application. Prior to the application, applicator Melchor Galvan went over to the fieldworkers and spoke with them. The fieldworkers moved to the opposite side of the field they were in, further away from the application site, before the application started at approximately 8:00 a.m. I monitored wind speed at the site with an application on my cell phone. There was no wind. I saw applicator Galvan start the application about 12 to 15 rows into our field and away from the service road that separates our field and the Coastal Berry - North field. I went to another lot there on site while applicator Galvan continued the application. The application proceeded row by row and westward toward the Coastal Berry - North field. The east side of our field was sprayed the day before. About 10 minutes after the application started I received a telephone call from David, Coastal Berry - North Supervisor, who said his fieldworkers were getting sick. I immediately went to the application site and told applicator Galvan to stop the application. By that time he had applied the pesticides to four rows. I then instructed applicator Galvan to continue the application in one of our neighboring lots further away from the fieldworkers. After receiving another call from David requesting labels for the pesticides we applied, I contacted applicator Galvan and told him to stop the application for the day. By that time he had applied two more tanks in the nearby lot. After applicator Galvan stopped the application he parked the spray rig on a service road two lots to the north of where the application was made earlier that morning. After speaking with applicator Galvan, I went to the east side of the Coastal Berry - North field, where David and the fieldworkers were, to deliver the pesticide labels. It was there I saw the fire truck and ambulances. After speaking with David I telephoned Mr. Tittle and informed him what had happened. Later that evening in the absence of any fieldworkers we completed the application, including

> the rows adjacent to the service road separating Garrett Farms and Coastal Berry - North. I don't think our pesticide application drifted upon the fieldworkers. That same morning I saw a couple Coastal Berry - North pesticide tractors driving by the area. I did not see them apply a pesticide, but their pesticide spray equipment may have emitted an odor that caused the fieldworkers to become ill.

CAC office records indicate J. RESENDIZ's employer, Los Amigos Harvesting, registered as a Farm Labor Contractor with the Santa Cruz CAC for year 2017 (Attachment 30). Los Amigos Harvesting principle Miles Steven Garrett has valid Farm Labor Contractor License #FLC000234426 with expiration date March 25, 2018.

On July 5, 2017, at 1125 hours, A. VINUELA, speaking in Spanish, interviewed in person D. VASQUEZ. In response to A. VINUELA's questions D. VASQUEZ stated the following in summary.

> On the morning of June 29, 2017, I received a telephone call from [redacted] foreman of the FMG crew harvesting raspberries for us at our Bronson Ranch. [redacted] informed me a neighboring Garrett Farms pesticide application was drifting upon her and her crew. I informed [redacted] I had no knowledge Garrett Farms would be making a pesticide application that morning. I telephoned Jose Resendiz, Supervisor of Garrett Farms, who informed me a pesticide application was taking place and he had forgotten to notify me of the application. Mr. Resendiz stated one of the pesticides being applied was Pristine. I informed Mr. Resendiz the harvest crew moved away from where they were harvesting due to pesticide exposure. I arrived at the Bronson Ranch about 10 minutes after receiving [redacted] call and observed Garrett Farms still making the application; the spray rig was working down the fourth row from the edge of the field. I then went to check on the FMG crew that was now on the west side of the lot, the opposite side of the lot from where they were harvesting earlier. After that, the ambulances arrived.

On July 5, 2017, all foliar samples collected (i.e., samples 1 through 6) were packed in an insulated ice chest along with seven packets of 'blue ice,' with each packet weighing approximately 20 ounces. All requisite documentation, i.e., Investigative Sample Analysis Report forms and sampling plan map (Attachment 15), was also packet in referenced ice chest. On this same date, at 1500 hours, the ice chest was delivered to The UPS Store at 1961 Main Street in Watsonville, California, for shipment to the California Department of Food and Agriculture (CDFA) Center for Analytical Chemistry-Residue laboratory in Sacramento, California.

On July 11, 2017, at 1419 hours, I contacted M. TITTLE by e-mail and requested a copy of Garrett Farms' employee pesticide handler written training program and training records pertaining to employees J. RESENDIZ and M. GALVAN. After reportedly consulting with CalRisk, Inc., the private company that provided referenced training for said employees, M. TITTLE (over a period of approximately three weeks) provided the documents requested (Attachment 12). Documents received included photocopies of training record forms and training certificates/cards for both men, a copy of DPR's *Pesticide Safety Information Series* (PSIS) leaflet A-8 and leaflet A-9 (both leaflets in English), and DPR website address http://www.cdpr.ca.gov/docs/whs/psisenglish.htm that provides access to the entire PSIS. The written training program received lacked any reference to pesticides used (by Garrett Farms employee pesticide handlers) which is necessary in addressing pesticide specific training

information requirements pursuant to Title 3 of California Code of Regulations (3 CCR), section 6724(b), Attachment 2. Further, training records received did not include employer's name (i.e., Garrett Farms) as required by 3 CCR 6724(e), Attachment 2. Also requested in the e-mail were copies of Garrett Farms pesticide use reports (PURs) and application-specific information display (ASID) for June, 2017, and information regarding the June 29, 2017, pesticide application at Garrett Farms site 1A Nugent Ranch, i.e., equipment used and spray droplet size. A copy of the American Society of Agricultural and Biological Engineers S572.1 standard (Attachment 1) was attached to the e-mail to provide M. TITTLE guidance regarding referenced droplet size.

On this same date, at 1425 hours, I telephoned R. MEYER who stated the incident report I requested in my earlier voicemail message had just been finalized and would be forwarded to me. R. MEYER noted #FD016052 was the incident's Dispatch Number and #2017-1001690 is the reference number for the corresponding Incident Report.

On July 13, 2017, at 0951 hours, I telephoned American Medical Response (AMR) of Santa Cruz County, the advanced life support ambulance transport provider that transported five FMG employees to Watsonville Community Hospital on June 29, 2017. I was directed to the voicemail mailbox of Mr. Brad Cramer. In a voicemail message to B. CRAMER I identified myself and requested copies of the AMR Prehospital Care Reports (PCRs) for the five FMG employees transported to Watsonville Community Hospital on the morning of June 29, 2017. After several failed attempts to contact B. CRAMER, I received a telephone voicemail message from Ms. Brenda Brenner, Emergency Medical Services Administrator/Senior Health Services manager of the Santa Cruz County Public Health Department, requesting I contact her regarding my acquisition of said PCRs.

On July 14, 2017, at 1405 hours, an e-mail was sent to J. RAMIREZ of Coastal Berry - North requesting copies of their pesticide use reports (PURs) and application-specific information display (ASID) for the month of June 2017 for their site 21A Bronson Ranch. On this same date J. RAMIREZ hand delivered to our office said records that were comprised of written recommendations, ASIDs and documents entitled Pesticide Application Record (Attachment 24). Pesticide use information obtained from CalAgPermits database for site 21A indicates Pristine Fungicide was applied on June 28, and Rally 40WSP was applied on June 23 and 25. Pesticide use information and application-specific information type display sheets provided by J. RAMIREZ indicate Pristine Fungicide was not applied to site 21A in June, whereas Rally 40WSP was applied on June 3, but not to block 7 where FMG employees were working the morning of the purported pesticide exposure incident. Further, J. RAMIREZ stated a pesticide application was made on June 28 to block 8 that is adjacent to and north of block 7. (J. RAMIREZ states the notation "1-3," the block/lot number, on both the Application-Specific Information record and Pesticide Application Record dated June 3, 2017, means "1, 2 and 3.") However, inconsistencies exist between the pesticide use information and information on the corresponding application-specific information display. Specifically: CalAgPermits data indicates applications were made on June 23 and 25, yet they are not recorded in the application information display; CalAgPermits indicates Pristine Fungicide was applied on June 28, but Pristine Fungicide is not present on the application-specific display for that date; and written recommendations indicate applications were made on June 3 and 27, but said applications do not appear in the CalAgPermits derived information. A determination cannot be made as to which information source, i.e., CalAgPermits, recommendations or the application-specific information display, is correct for the various applications. Failure to submit a PUR is a violation of 3 CCR 6626(a) and failure to include a

pesticide application on the application-specific information display is a violation of 3 CCR 6723.1(b), Attachment 2.

On July 15, 2017, at 0936 hours, I received an e-mail from M. TITTLE providing an update on his collection and submission of information previously requested. M. TITTLE indicated spray adjuvant Widespread Max was inadvertently omitted from the PUR previously provided regarding the June 29, 2017, application to Garrett Farms site 1A Nugent Ranch. M. TITTLE also stated the spray rig used to apply pesticides to Garrett Farms site 1A Nugent Ranch on June 29, 2017, was a Gearmore P42N1-400G with spray nozzles ranging in height from ground level to approximately five feet. Based on nozzle size used and a spray pressure of 35 PSI, M. TITTLE determined the application droplet size to be "very fine" according to the American Society of Agricultural and Biological Engineers S572.1 standard (Attachment 1).

On July 17, 2017, at 0800 hours, I received six Pesticide Incident Reports (PIRs), one for each of the six FMG employees that obtained medical care at Watsonville Community Hospital after the purported pesticide exposure incident on June 29, 2017. D. SANFORD obtained said PIRs from CalPEATS (California Pesticide Enforcement Activity Tracking System) WHS (Worker Health and Safety, DPR) investigation requests. Additionally, a Doctor's First Report of Occupational Injury or Illness (DFROII) regarding [redacted] was received from WorkWell Medical Group, Hollister, California, on August 28, 2017. Said PIRs and DFROII comprise Attachment 6. As of the writing of this report no PIR or DFROII has been received by the CAC regarding FMG employee [redacted]

On July 17, 2017, at 1203 hours, I e-mailed FMG Farm Contracting, Inc. and requested Fieldworker Training records for the 24 FMG employees involved in the purported pesticide exposure incident on June 29, 2017. In response to said request, FMG provided 12 separate records documenting training on an equal number of dates (Attachment 11). Of these 12 documents, only three appear to record fieldworker safety training pursuant to 3 CCR 6764 (Attachment 2). Analysis of the three documents pertaining to field worker safety training is outlined below.

- Title(s) and source(s) of training materials used do not appear on any record.
- Trainer's name appears on only one record, and trainer's qualifications does not appear on any record.
- Ten employees worked in a treated field without receiving requisite training from FMG within the past year.

CAC office records indicate FMG Farm Contracting, Inc. registered as a Farm Labor Contractor with the Santa Cruz CAC for year 2017 (Attachment 29). FMG principle Francisco Mora Gonzales has valid Farm Labor Contractor License #FLC000185517 with expiration date February 1, 2018.

On July 17, 2017, at 1445 hours, a fax was sent to Watsonville Community Hospital Medical Records Department requesting all pertinent medical records for the six FMG employees that obtained medical care at said hospital after the purported pesticide exposure incident on June 29, 2017. Said fax included signed Medical Information Authorization forms, one for each of the six FMG employees. Only five of the six records requested were received; medical records for [redacted] could not be located by said hospital due to the erroneous date of birth on his Medical

Information Authorization form (Attachment 22). ([redacted] could not be contacted to obtain his correct date of birth.) Individual employee symptoms and diagnoses are summarized below.

- [redacted]
  - ER arrival – June 29, 2017 at 0919 hours.
  - Symptoms nausea and vomiting.
  - Diagnosis – exposure to Pristine Fungicide with nausea and vomiting within hours of exposure.
  - Discharge – June 29, 2017 at 1046 hours.

- [redacted]
  - ER arrival – June 29, 2017 at 0905 hours.
  - Symptoms – nausea, vomiting, dizziness and sore/itchy throat.
  - Diagnosis – exposure to Pristine Fungicide with severe nausea, vomiting and sore throat.
  - Discharge – June 29, 2017 at 1223 hours.

- [redacted] – Medical Information Authorization form only (medical records unavailable).

- [redacted]
  - ER arrival June 29, 2017 at 0918.
  - Symptoms – burning sensation in both eyes.
  - Diagnosis – acute bilateral chemical conjunctivitis (i.e., inflammation and/or swelling of the conjunctiva) secondary to fungicide exposure.
  - Discharge – June 29, 2017 at 1257 hours.

- [redacted]
  - initial visit – June 29, 2017
    - ER arrival – 0906 hours.
    - Symptoms – nausea, shortness of breath, and burning, sore and itchy throat.
    - Diagnosis – chemical exposure to Pristine Fungicide with sore throat, nausea and shortness of breath.
    - Discharge – 1040 hours.
  - follow-up visit – June 30, 2017
    - ER arrival – 1107 hours.
    - Symptoms – nausea and vomiting.
    - Diagnosis – chemical exposure.
    - Discharge – 1344 hours.

- [redacted]
  - ER arrival – June 29, 2017 at 0919 hours.
  - Symptoms – nausea, vomiting and sore throat.
  - Diagnosis – accidental exposure to Pristine Fungicide with localized irritation causing nausea, vomiting and sore throat.
  - Discharge – June 29, 2017 at 1103 hours.

Aforesaid medical records and Medical Information Authorization forms appear in Attachment 22.

On this same date, at 1516 hours, a fax was sent to WorkWell Clinic in Watsonville, California, requesting all pertinent medical records on FMG employee [redacted], 21 year old, male, who visited said clinic on June 30, 2017, and obtained medical care as a result of the purported pesticide exposure incident on June 29, 2017. Said fax included a Medical Information Authorization form signed by [redacted] After several attempts to contact said clinic by fax, I spoke by telephone on August 28, 2017, with Ms. Veronica Arellano of the WorkWell Medical Group, Hollister, California office who, on that same day, provided said records by both e-mail and fax. Medical records provided are for [redacted] initial visit to the clinic on June 30, 2017, and his follow-up visit on July 3, 2017. [redacted] symptoms and diagnoses are summarized below.

- Initial visit – June 30, 2017
  - ER arrival – 0850 hours.
  - Symptoms – aching, headache, dizziness, nausea, vomiting, bilateral eye itchiness and burning, blurred vision, itchiness of throat, trunk and upper extremities, cough with phlegm and shortness of breath.
  - Diagnosis – chemical exposure, pain in throat, headache, nausea with vomiting, unspecified, pruritus and toxic effects of pesticides.
  - Discharge – unknown

- Follow-up visit – July 3, 2017
  - ER arrival – 0830 hours.
  - Symptoms – itching on back of right arm.
  - Diagnosis – chemical exposure, pain in throat, headache, nausea with vomiting, unspecified, pruritus and toxic effects of pesticides.
  - Discharge – 0913 hours.

[redacted] medical records and Medical Information Authorization form appear in Attachment 22.

A second FMG employee [redacted] also obtained professional medical care at WorkWell Clinic for physical symptoms he experienced as a result of the purported pesticide exposure incident on June 29, 2017. [redacted] medical records could not be obtained, for he could not be contacted to sign a Medical Information Authorization form. [redacted] was however interviewed earlier regarding the purported pesticide exposure incident and his statements recorded. A summary of [redacted] interview statements is included with that of the other 22 FMG employees interviewed.

On July 21, 2017, at 1306 hours, I spoke by telephone with Steve Garrett, owner of Garrett Farms, who requested I interview his employee truck driver Oscar Ortiz. O. ORTIZ was reportedly at Garrett Farms site 1A Nugent Ranch the night before the purported pesticide exposure incident and witnessed activities on neighboring Coastal Berry - North site 21A Bronson Ranch that were indicative of a pesticide application. S. GARRETT said he would let his office staff know I would be contacting them to schedule a meeting with O. ORTIZ.

On this same date, at 1334 hours, I spoke by telephone with B. BRENNER and was informed AMR had requested she provide me the Prehospital Care Reports (PCRs) for the individuals they transported to Watsonville Community Hospital on June 29, 2017. When B. BRENNER indicated she had only three PCRs I informed her AMR transported a total of five FMG employees to the

hospital on June 29, 2017; three individuals in one ambulance and two individuals in a second ambulance. B. BRENNER requested I provide her a memo requesting the PCRs and the names of those individuals for whom a PCR was requested. Said memo and corresponding Medical Information Authorization forms were sent to B. BRENNER by e-mail on this same date.

On this same date, at 1556 hours, an e-mail was sent to M. TITTLE stating I had yet to receive Garrett Farms employee handler training program and the application-specific information for June, 2017.

On the afternoon of July 24, 2017, I contacted the Garrett Farms office and scheduled a meeting between A. VINUELA and O. ORTIZ at Garrett Farms site 1A Nugent Ranch on July 25, 2017.

On July 25, 2017, at 0905 hours, A. VINUELA, speaking in Spanish, interviewed in person O. ORTIZ. In response to A. VINUELA's questions O. ORTIZ stated the following in summary.

> I was an employee of Garrett Farms for 20 years. This past year I have been an employee of Los Amigos Harvesting. I work under the supervision of Morgan Tittle and Jose Resendiz. My job title is Truck Driver and I drive trucks transporting fruit to coolers. I also drive tractors, forklifts and other equipment. I was not at Garrett Farms site 1A Nugent Ranch on the morning of June 29, 2017. The night before, June 28, 2017, at 8:00 p.m., I was at site 1A assisting a pesticide application by driving the water tank truck. When driving along the service road that separates the Coastal Berry - North ranch and the Garrett Farms Nugent Ranch, I saw a truck and tractor commonly used by Coastal Berry - North to make pesticide applications and a sign of the type used to post a field prior to a pesticide application. Referenced tractor and sign were located on the Coastal Berry - North side of the service road about half way between their equipment yard and shade house. I did not see any workers in the area nor smell any pesticide odor. I do not know if a pesticide was applied to that field or if they were planning to make an application.

On July 26, 2017, at 1331 hours, I received by e-mail from B. BRENNER the five Prehospital Care Reports (PCRs) previously requested. Said Prehospital Care Reports comprise Attachment 27.

On this same date I received an e-mail from the Watsonville Fire Department with two attached documents regarding the purported pesticide exposure incident of June 29, 2017. One document is entitled Prehospital Care Report and the other is without title. The Prehospital Care Report references number FFD170629016052 as both the Incident number and Call number, whereas the untitled document references Dispatch Run #FFD170629016052 and Incident #2017-1001690. Attached to the untitled document are photographs taken in the field of page 1 and page 2 of a pesticide Pristine Fungicide container label. Aforesaid reports collectively state the following in summary.

> Fire Department Engine 4413 responded to a report of a female patient and crew of 25 [*sic*] field workers who became sick after being sprayed by an unknown chemical at East Lake and Wagner Ave. At 0837 hours Engine 4413 arrived on scene where five members of the crew were complaining of shortness of breath, eye irritation, headache and nausea, and two of the five were vomiting. Prior to arrival, Engine 4413 called all responding ambulance units to the scene. On site Manager David Vasquez identified the chemical as Pristine (fungicide), provided some MSDS type material, but was not specific as to how the group

was sprayed. MSDS information advised decontamination with "plenty of water." Five crew members were decontaminated and escorted to ambulance units 3 and 4 for transport to Watsonville Hospital. Early notification was given to the hospital regarding the chemical and number of patients being transported there. After decontaminating the five patients and turning the scene over to the responsible property manager, Engine 4413 proceeded to the hospital to ensure all pertinent information was relayed to the staff. Engine 4413 was assigned to patient decontamination. All treatment, care and assessment was performed by referenced ambulances. After return to station both Cal OSHA and the local Agricultural Commissioner were notified.

Referenced documents received from the Watsonville Fire Department comprise Attachment 14.

On July 27, 2017, at 1330 hours, I spoke by telephone with M. TITTLE who stated Garrett Farms pesticide use reports and written recommendations are displayed within 24 hours of pesticide application stop time and collectively possess all information required by regulation of an ASID (application-specific information display).

On August 3, 2017, at 1535 hours, I spoke by telephone with M. TITTLE who (1) confirmed pesticide handler training information for Garrett Farms employees previously submitted is complete, (2) annotated pesticide use written recommendations serve as Garrett Farms ASID, and (3) Garrett Farms PURs for June 2017 will be provided as soon as possible.

On August 4, 2017, at 0903 hours, I received an e-mail from M. TITTLE that included annotated pesticide use written recommendations and PURs for all pesticide applications made to Garrett Farms site 1A Nugent Ranch in June 2017. Annotated recommendations indicate pesticide Pristine Fungicide was applied to said ranch on June 8 and 9, 2017, and both Pristine Fungicide and Rally 40WSP were applied on June 29, 2017. The PUR received for the June 29, 2017, pesticide application was incorrectly dated June 28, 2017. Aforesaid documents comprise Attachment 25.

On this same date, at 1350 hours, an e-mail was sent to M. TITTLE informing him the PUR received for the Garrett Farms site 1A Nugent Ranch June 29, 2017, pesticide application was incorrectly dated June 28, 2017. In this same e-mail I requested M. TITTLE provide me with a PUR with the correct application date of June 29, 2017. Subsequent to this request M. TITTLE provided a revised PUR for the June 29, 2017, application. This revised PUR included previously omitted spray adjuvant Widespread Max, yet was dated July 29, 2017 (Attachment 25). Further, CalAgPermits pesticide use information for Garrett Farms site 1A Nugent Ranch indicates only one pesticide application was made in June 2017, i.e., Pristine Fungicide and two other pesticides on June 9 (Attachment 25). However, information received from M. TITTLE indicates applications to said site occurred on June 8, 9 and 29, 2017. Failure to submit a PUR for a pesticide application is a violation of 3 CCR 6626(a), Attachment 2.

On this same date, A. VINUELA performed field worker safety inspections on both FMG Farm Contractor, Inc. and on Los Amigos Harvesting (inspection #103-44-17-M002-013 and #103-44-17-M002-014, respectively), Attachment 9 and 10, respectively. No regulatory violations were observed in either inspection.

On August 8, 2017, at 1524 hours, an e-mail was received from the CDFA Center for Analytical Chemistry-Residue that included Investigative Sample Analysis Report forms and corresponding

laboratory test results (Attachment 15) for the six raspberry plant foliar samples submitted for analysis on July 5, 2017. All six samples were tested for the presence of the active ingredients (a.i.'s) in pesticides Pristine Fungicide (a.i. boscalid and pyraclostrobin) and Rally 40WSP (a.i. myclobutanil). Pristine Fungicide and Rally 40WSP were two of the four pesticides applied by Garrett Farms to their site 1A on the morning of June 29, 2017. Test results indicate the presence of both aforesaid pesticides (i.e., their a.i.'s) in all six samples. Sample test results appear below.

		Rally 40WSP	Pristine Fungicide	
Sample #	Sample I.D. #	Myclobutanil (ppm)	Pyraclostrobin (ppm)	Boscalid (ppm)
1	GF-1-SC	3.1	4.0	33.5
2	GF-2-SC	1.2	1.3	12.6
3	GF-3-SC	1.1	1.1	9.7
4	GF-4-SC	1.7	2.2	12.0
5	GF-5-SC	4.8	12.2	28.0
6	GF-6-SC	0.79	1.2	12.2

After review of referenced Investigative Sample Analysis Report forms, D. SANFORD contacted Louie Guerra, Senior Environmental Scientist (Supervisory), DPR Central Regional Office, regarding corrections made to the test result entries on referenced forms (Attachment 15).

On August 16, 2017, at 1656 hours, D. SANFORD received an e-mail from L. GUERRA indicating the CDFA laboratory's original sample analysis test results were calculated using an incorrect dilution factor. Said error was discovered and pesticide residue level values were recalculated and corrected on the Investigative Sample Analysis Report forms (Attachment 15). In further regard to information on said forms, samples GF-1-SC thru and including GF-5-SC were placed in the CAC refrigerator for storage at 1850 hours (not the time indicated on referenced form), and sample GF-6-SC was placed in the CAC refrigerator on 7-1-18 at 0955 hours.

On September 12, 2017, at 1530 hours, I contacted Los Amigos Harvesting by telephone and spoke with Office Manager Patty Garrett. I informed P. GARRETT that when interviewed, J. RESENDIZ stated he was an employee of Los Amigos Harvesting, whereas M. GALVAN stated he was an employee of Garrett Farms. P. GARRETT informed me M. GALVAN, J. RESENDIZ and M. TITTLE were Los Amigos Harvesting employees. I informed P. GARRETT (1) employers of pesticide handlers must maintain a copy of their written training program and corresponding training records pursuant to 3 CCR 6724 (a) and (e) respectively (Attachment 2), and (2) I already obtained referenced information related to J. RESENDIZ and M. GALVAN from Garrett Farms Authorized Representative M. TITTLE. I informed P. GARRETT I would forward to her said information obtained from M. TITTLE and asked that she state it is complete or provide any missing information.

On this same date, at 1617 hours, I e-mailed to P. GARRETT the employee handler training program and records for J. RESENDIZ and M. GALVAN that I received from M. TITTLE (Attachment 12). (M. TITTLE possesses a valid Private Applicator Certificate and is therefore considered trained to handle pesticides per 3 CCR 6724(d), Attachment 2.)

On September 14, 2017, at 1621 hours, I sent an e-mail to P. GARRETT and asked (1) if Los Amigos Harvesting possessed a Pest Control Business Licensed issued by DPR, (2) who pays the salary and workers compensation insurance for employees M. TITTLE, J. RESENDIZ and M. GALVAN, and (3) who supervises and directs the work activities of said employees.

On September 20, 2017, at 1010 hours, I received a telephone voice mail message from S. GARRETT requesting I contact him. An hour later I spoke by telephone with S. GARRETT who indicated the information requested from Los Amigos Harvesting in my e-mails dated September 12 and 14, 2017, would be provided as soon as possible. S. GARRETT also requested I obtain a statement from an individual who reportedly possessed information pertinent to the present investigation. I informed S. GARRETT said individual would be interviewed.

On October 2, 2017, at 1300 hours, S. GARRETT visited the CAC office and provided the handler training program and training records related to Los Amigos Harvesting employee handlers J. RESENDIZ and M. GALVAN (Attachment 13), and responded to my earlier questions regarding remuneration and supervision of said employees. Training program and records provided include one document entitled Written Training Program, two documents entitled Training Log (one with a date and one without a date), a Pesticide Handler/Applicator Training Program form for J. RESENDIZ and the same for M. GALVAN, photocopies of training certificates/cards for both men and a copy of DPR's *Pesticide Safety Information Series* (PSIS) leaflet A-8 and leaflet A-9 (both leaflets in English). Aforesaid program and records satisfy all applicable requirements set forth in 3 CCR 6724 (Attachment 2) with one exception: spray adjuvant Widespread Max (CA Reg. No. 34704-50061) that was applied by referenced employee handlers on June 29, 2017, is not listed among the pesticides for which training was provided. (The definition of "pesticide" in FAC 12753, Attachment 3, includes any spray adjuvant.) Regarding supervision, S. GARRETT is permittee/operator of the property for Garrett Farms' California restricted material permit #44-17-440168A (Attachment 5). Pursuant to 3 CCR 6420(a), Attachment 2, S. GARRETT provided the CAC written documentation designating M. TITTLE as his authorized representative and, as such, was authorized to act on behalf of S. GARRETT. M. TITTLE is the supervisor of both J. RESENDIZ and M. GALVAN. Further, Los Amigos Harvesting remunerates and maintains workers compensation insurance for all three employees (i.e., M. TITTLE, J. RESENDIZ and M. GALVAN). Regarding possession of a DPR Pest Control Business License required by FAC, section 11701 (Attachment 3), to advertise, solicit or operate a pest control business, i.e., perform pest control for hire, S. GARRETT and P. GARRETT (the latter in an earlier telephone conversation) stated Los Amigos Harvesting does not possess said license. The DPR database of individual/personal and business licensees does not include Los Amigos Harvesting as a Pest Control Business.

On October 6, 2017, at 1135 hours, A. VINUELA, speaking in Spanish, interviewed in person the individual S. GARRETT requested (on September 20, 2017) be interviewed regarding the purported pesticide exposure incident on June 29, 2017. At the outset of said interview referenced individual requested their identity remain anonymous. In response to A. VINUELA's questions, referenced individual stated the following in summary.

> I was at the Coastal Berry - North Bronson ranch on June 29th around 8:00 a.m. towing some heavy machinery with a tractor. I was at the north end of the lot where the harvesting crew was working and heading southbound on the service road. I was traveling slowly behind a pesticide application spray rig when the driver of the rig stopped and spoke to the harvesting crew. He then went approximately 15 rows into the caneberry field

and started the application. I did not smell or see any pesticides in the air. I saw the harvesting crew move to the west side of the field. After a while I saw the first responders come to the field. I do not think the pesticide application drifted upon the harvesting crew. Maybe they experienced an odor, but not pesticide drift. In my opinion, the applicator started spraying a reasonable distance away from the fieldworkers.

On October 27, 2017, at 1420 hours, I spoke by telephone with F. LEON regarding proper identification of an employee's employer. F. LEON provided referral to Guidelines for Interpreting Pesticide Laws, Regulations, and Labeling, Employer Identification, *Pesticide Use Enforcement Program Standards Compendium*, Volume 8, DPR (Attachment 23), and Determining When a Pest Control Business License is Required by a Farm Labor Contractor, PML 01-12 (Attachment 8).

On October 31, 2017, at 1520 hours, I spoke by telephone with M. TITTLE who stated no one "on-site" at Los Amigos Harvesting provided primary direction and control over the pest control work he, J. RESENDIZ and/or M. GALVAN performed. M. TITTLE indicated that he as the Authorized Representative of Garrett Farms directed and controlled pest control work performed at Garrett Farms.

On November 1, 2017, at 1332 hours, an e-mail was sent to P. GARRETT of Los Amigos Harvesting requesting additional information regarding primary direction and control of pest control work perform by Los Amigos Harvesting employees M. TITTLE, J. RESENDIZ and M. GALVAN.

On November 2, 2017, at 1550 hours, I received a telephone call from S. GARRETT requesting I meet with him at Garrett Farms site 1A Nugent Ranch to witness a simulated pesticide application using the same equipment and application parameters as that used on the morning of June 29, 2017, during the purported pesticide exposure incident. I informed S. GARRETT I already obtained from M. TITTLE requisite information regarding the June 29, 2017, pesticide application, yet would meet with him to witness said simulation. A meeting was scheduled for November 9, 2017, at 0900 hours. Further, S. GARRETT indicated he would at said meeting provide the information requested in my November 1, 2017, e-mail to Los Amigos Harvesting regarding primary direction and control of pest control work perform by Los Amigos Harvesting employees.

On November 9, 2017, at approximately 0830 hours, I received a telephone call from S. GARRETT suggesting our meeting scheduled for this same date be cancelled due to inclement weather. The meeting was rescheduled for November 14, 2017, at 0900 hours.

On this same date, at 1256 hours, an e-mail was sent to P. GARRETT of Los Amigos Harvesting requesting additional information including who provided primary direction and control of pest control work perform by their employees, and in what capacity did this individual serve Los Amigos Harvesting.

On November 14, 2017, at approximately 0830 hours, I received a telephone call from S. GARRETT who stated he was unable to attend our scheduled meeting and suggested I meet with a member of his staff to observe aforementioned simulated pesticide application. I declined the meeting and reiterated my observation of a simulated application was unnecessary, for I already possessed requisite information regarding the June 29, 2017, pesticide application at Garrett Farms

site 1A Nugent Ranch. When asked to provide the information previously requested of Los Amigos Harvesting regarding primary direction and control of pest control work perform by Los Amigos Harvesting employees, my call was transferred to P. GARRETT. P. GARRETT stated referenced information was forthcoming.

On November 14, 2017, at 0936 hours, D. SANFORD and I received an e-mail from Mr. Anthony Oceguera, Attorney at Law, indicating (1) his office was assisting S. GARRETT and Garrett Farms with the ongoing investigation of a possible pesticide exposure incident, and (2) answers to the aforementioned questions (i.e., primary direction and control of pest control work perform by Los Amigos Harvesting employees) posed to P. GARRETT of Los Amigos Harvesting were forthcoming.

On December 15, 2017, at 1611 hours, an e-mail was received from A. OCEGUERA (Attachment 7) providing responses to questions posed to farm labor contractor Los Amigos Harvesting in my November 1, 2017, e-mail regarding primary direction, control and supervision of their employees when performing pest control work for Garrett Farms. A. OCEGUERA's statements are summarized as follows.

> Los Amigos Harvesting, pursuant to a Farm Labor Contractor Services Agreement, provides services to Garrett Farms that include hiring, supervision and management of laborers to conduct operations including all necessary pest control services. Under said agreement Los Amigos Harvesting is solely responsible for the primary direction, control and supervision of Los Amigos Harvesting employees Mr. Tittle, Mr. Resendiz and Mr. Galvan. Mr. Tittle, as the foreman, had the authority and discretion to manage his crews, which included employees Mr. Resendiz and Mr. Galvan. Nobody provided primary direction, control and supervision of Mr. Tittle, however he did generally report to Los Amigos Harvesting ownership. Referenced agreement further states Garrett Farms has no right to direct or control Los Amigos Harvesting employees.

Title 3 of California Code of Regulations, section 6000 (Attachment 2), states ""Employer" means any person who exercises primary direction and control over the work, services, or activities of an employee. A foreman, crew leader, supervisor, or similarly situated person represents the employer when hiring an employee or when exercising, or having responsibility for exercising, the primary direction and control, but is not considered the employer himself or herself." Further, DPR's *Pesticide Use Enforcement Program Standards Compendium*, Volume 8, Section 6.7 - Employer Identification (Attachment 23) holds that a duality of employers may exist where a primary (or general) employer supplies the contract employee for a fee and a secondary (or special) employer provides the workplace and controls how the work is to be done, directs what work is to be done or supervises the work activities of the contract employee. Food and Agricultural Code, section 11701 (Attachment 3), states "It is unlawful for a person to advertise, solicit, or operate as a pest control business, unless the person has a valid pest control business licensed issued by the director [of DPR]." However, a duly licensed farm labor contractor (FLC) may provide a grower with a contract employee to perform pest control work, so long as said employee is properly trained pursuant to 3 CCR 6724 (Attachment 2). The Department of Pesticide Regulation's PML 01-12 (Farm Labor Contractor - Determining When a Pest Control Business License is Required by a Farm Labor Contractor, Attachment 8) indicates an FLC must possess a pest control business licenses (PCB) before providing to a client employees that perform pest control under the primary direction and control of that FLC. Conversely, if the FLC provides

to a client employees that perform pest control under the primary direction and control of the client, DPR does not require the FLC to possess a valid PCB license.

Recommendation #6649 for the Garrett Farms June 29, 2017, pesticide application received from M. TITTLE was written by Pest Control Advisor (PCA) Daniel Schmida. D. SCHMIDA has valid PCA licensed #71094 (categories A, B, C and E) issued by DPR with expiration date December 31, 2017. D. SCHMIDA is registered as a PCA with the Santa Cruz County CAC for year 2017. Said recommendation (Attachment 28) includes all information required in a Written Recommendation pursuant to FAC 12003 and 3 CCR 6556 (Attachments 3 and 2, respectively). Said recommendation was for the following pesticide use.

- DiPel DF – EPA Reg. No. 73049-39, a.i., *Bacillus thuringiensis* 54%, signal word Caution, application rate 2 pounds/acre, 4 hour REI (Attachment 16).
- Pristine Fungicide – EPA Reg. No. 7969-199, a.i., pyraclostrobin 12.8% and boscalid 25.2%, signal word Caution, application rate 18.5 ounces/acre, 12 hour REI (Attachment 17).
- Rally 40WSP – EPA Reg. No. 62719-410, a.i., myclobutanil 40%, signal word Caution, application rate 2.5 ounces/acre, 24 hour REI (Attachment 18).
- Widespread Max – CA Reg. No. 34704-50061, a.i., polyether-polymethylsiloxane-copolymer polyether 100%, signal word Warning, application rate 6 fluid ounces/acre, REI not specified (Attachment 19).

Registered use and application rates recorded on aforesaid recommendation are consistent with pesticide label requirements.

Weather conditions reported hourly on June 29, 2017, by the California Irrigation Management Information System (CIMIS) Green Valley Road station #111 (Attachment 32) during the time of the purported pesticide exposure incident are summarized as follows:

Time	Wind Direction	Wind Speed
7:00 a.m.	255° (W/SW)	2.4 mph
8:00 a.m.	329° (N/NW)	3.1 mph
9:00 a.m.	297° (W/NW)	2.8 mph

Garrett Farms employee pesticide handler M. GALVAN stated he started the application on June 29, 2017, sometime between 7:30 a.m. and 8:00 a.m., and stopped the application approximately 20 minutes later. Wind speed reported by CIMIS was 2.4 mph from the west/southwest at 7:00 a.m., increased to 3.1 mph from the north/northwest at 8:00 a.m., and was 2.8 mph from the west/northwest at 9:00 a.m. (Wind direction is reported as the direction from which the wind originates, e.g., "west" denotes winds blowing from west to east.) Aforesaid weather station is located approximately 1.1 miles northwest of the purported pesticide exposure site.

Findings

On the morning of June 29, 2017, fifteen out of 24 FMG Farm Contractor employees harvesting raspberries at Coastal Berry - North site 21A Bronson Ranch experienced physical symptoms indicative of chemical exposure. Eight of the employees received professional medical care for

their physical symptoms. Physical symptoms reported by these eight employees and corroborated by medical personnel were consistent with those listed on registered labels and/or safety data sheets (SDS) for pesticides DiPel DF, Pristine Fungicide, Rally 40WSP, and Widespread Max (Attachment 31). Hospital medical records for referenced employees state the diagnosis as pesticide Pristine Fungicide exposure or chemical exposure. Five FMG employees reported their physical symptoms to the crew foreman, but were not immediately taken to a physician.

Various documents and eyewitness statements indicate farm labor contractor Los Amigos Harvesting applied pesticides DiPel DF, Pristine Fungicide, Rally 40WSP and Widespread Max to Garrett Farms site 1A Nugent Ranch at approximately 0800 hours on June 29, 2017, while FMG employees were working in neighboring Coastal Berry - North site 21A Bronson Ranch. Conflicting evidence exists regarding the distance between where the pesticides were applied and where the FMG employees were working. Of the FMG employees that saw the pesticide application all stated it began along the first row of plants on Garrett Farms site 1A Nugent Ranch immediately across the service road from where they were working or no more than approximately 100 feet away. M. GALVAN stated he started the application 12 rows (i.e., approximately 87 feet) into the field and from there proceeded row by row eastward into an area reportedly already treated with pesticides. J. RESENDIZ, stated the pesticide application began approximately 12 to 15 rows into the field, but from there proceeded westward toward FMG employees. Both M. GALVAN and J. RESENDIZ stated there was no wind when the pesticide application started. The California Irrigation Management Information System reports wind speed during the approximate time of pesticide application was 2.4 to 3.1 mph with wind direction ranging between north/northwest to west/southwest.

M. TITTLE of Los Amigos Harvesting stated (1) a Gearmore P42N1-400G with spray nozzles ranging in height from ground level to approximately five feet was used to make the pesticide application at Garrett Farms site 1A the morning of June 29, 2017, and (2) the resultant spray droplet size was "very fine" pursuant to the American Society of Agricultural and Biological Engineers S572.1 standard (Attachment 1). Said standard indicates a "very fine" droplet size has a "high" potential for drift, i.e., off site movement. Appreciating the spray nozzles were directed perpendicularly out from the spray rig, and said rig applied pesticide along raspberry rows running parallel to the service road separating Garrett Farms site 1A and neighboring Coastal Berry - North site 21A, pesticide spray was directed toward nearby FMG employees.

Interviews were conducted with 23 of the 24 FMG Farm Contractor employees that were working at Coastal Berry - North site 21A Bronson Ranch during the pesticide exposure incident. All eight of the employees that received professional medical care for pesticide exposure reported seeing the pesticide application mist and experienced a strong/bad odor. One of these employees reported pesticide contaminating her skin and clothes and saw the surface of the harvesting trailer's table top wet with pesticide. Of the remaining 15 employees, eight reported seeing the pesticide application mist and five experienced a strong/bad odor. Once FMG employees started exhibiting symptoms of pesticide exposure, their supervisor ordered them out of the area. M. GALVAN stated he spoke with FMG employees prior to his application of pesticides and asked (1) how long they would be in the area, and (2) that they signal to him if they experienced any pesticide odor. M. Galvan's foregoing statements were corroborated by FMG employees. Dole Fresh Foods Caneberry Manager Freddie Yanez ordered the picked fruit on the harvesting trailer's table be destroyed due to possible pesticide contamination.

The PUR received from M. TITTLE that he stated was for the pesticide application made to Garrett Farms site 1A Nugent Ranch on June 29, 2017, possesses an incorrect application date. When questioned regarding said PUR's erroneous date, Los Amigos Harvesting failed to comment. However, the annotated pesticide recommendation received for said application indicates pesticides DiPel DF, Pristine Fungicide, Rally 40WSP, and Widespread Max were applied to said site on June 29, 2017, from 7:00 a.m. to 8:30 a.m. and again later that same day from 4:00 p.m. to 6:00 p.m. Further, CalAgPermits pesticide use information for Garrett Farms site 1A Nugent Ranch indicates only one pesticide application was made in June 2017, i.e., Pristine Fungicide (and two other pesticides) on June 9. However, information received from M. TITTLE indicates applications to said site occurred on June 8, 9 and 29, 2017.

Raspberry plant foliar samples collected at Coastal Berry - North site 21A Bronson Ranch and Garrett Farms site 1A Nugent Ranch on June 29, 2017, were analyzed for the presence of Pristine Fungicide and Rally 40WSP; two of the four pesticides applied at Garrett Farms site 1A Nugent

Ranch on the morning of the June 29, 2017, purported pesticide exposure incident. Referenced samples tested positive for the presence of Pristine Fungicide and Rally 40WSP. Available evidence indicates said pesticides were also applied by Coastal Berry - North to their site 21A Bronson Ranch during the month of June, but not to block #7 where the FMG employees were working the morning of the June 29, 2017, purported pesticide exposure incident.

M. GALVAN made the pesticide application to Garrett Farms site 1A Nugent Ranch on the morning of the June 29, 2017, purported pesticide exposure incident and was an employee under the primary direction and control of farm labor contractor Los Amigos Harvesting. Department of Pesticide Regulation records and P. GARRETT both indicate Los Amigos Harvesting did not possess a valid Pest Control Business (PCB) license that is required of a farm labor contractor (FLC) before providing to a client (i.e., Garrett Farms) employees that perform pest control under the primary direction and control of that FLC. Further, said company (1) operated as a pest control business in Santa Cruz County without first registering as such with the Santa Cruz CAC, and (2) failed to submit pesticide use reports to the CAC within seven days of completion of pesticide applications.

Los Amigos Harvesting employees J. RESENDIZ and O. ORTIZ saw Coastal Berry - North pesticide application tractors at their site 21A Bronson Ranch. One of the sightings was at 8:00 p.m. the night before the exposure incident and the other on the morning of the exposure incident. Said tractors were either sitting idle, being washed or driven in the vicinity of the incident. None of the tractors were observed making a pesticide application. O. ORTIZ also observed pesticide applications signs posted at referenced site. Title 3 CCR 6776(c), Attachment 2, allows pesticide application signs to be posted up to 24 hours prior to a pesticide application and may remain posted at an application site for three days after the end of the application restricted entry interval.

Employee pesticide handler training records regarding M. GALVAN and J. RESENDIZ submitted by their employer Los Amigos Harvesting lacked information required by California Code of Regulations, i.e., spray adjuvant Widespread Max was not listed as a pesticide for which training was provided.

The Coastal Berry - North application-specific information display forms for June, 2017, were lacking information required by regulation, i.e., June 23 and 25, 2017, pesticide applications to site 21A Bronson Ranch and a June 28 application of Pristine Fungicide to block #8 of said ranch.

Additionally, Coastal Berry - North written recommendations indicate pesticide applications were made to referenced ranch on June 3 and 27, 2017, yet these applications were not reported as required by regulation and do not appear in CalAgPermits pesticide use records.

Fieldworker safety training records submitted by FMG Farm Contractor, Inc. for their employees working at Coastal Berry - North site 1A Bronson Ranch on the morning of June 29, 2017, indicate only 14 of the 24 employees received requisite field worker safety training within the past year before beginning work in a treated field. However, when interviewed, 22 of the 24 employees stated they had received fieldworker safety training within the past year. This discrepancy may be due in part to a lack of specificity in the question posed to employees during the interview and employees conflating fieldworker safety training pursuant to 3 CCR 6764 with other training provided by said employer (e.g., drug use in the workplace, heat stress). Referenced records indicate employees [redacted] and C. CAMARILLO did not receive fieldworker safety training from FMG Farm Contractor, Inc. and both employees stated they had not received fieldworker safety training within the past year as required by regulation. Referenced employer's safety training records lacked information required by Title 3 of California Code of Regulations, i.e., titles and sources of training materials and trainer's name and qualifications.

Conclusions

Coastal Berry - North failed to submit a PUR for pesticide applications made to their site 21A Bronson Ranch on June 3 and June 27, 2017, and thereby violated 3 CCR 6626(a) that states:

> *(a) The operator of the property which is producing an agricultural commodity shall report the use of pesticides applied to the crop, commodity, or site to the commissioner of the county in which the pest control was performed. This report must be submitted by the 10th day of the month following the month in which the work was performed. This report is not required if the pesticide use is reported to the commissioner by pest control business as specified in subsection (b); however, the operator of the property treated, shall retain a copy of the business' "Report by Site" for two years.*

Coastal Berry - North failed to include requisite information regarding their pesticide applications made to their site 21A Bronson Ranch on June 23, 25 and 28, 2017, in their application-specific information display for June 2017, and thereby violated 3 CCR 6723.1(a) and (b) that state:

> *(a) The operator of property used for the commercial or research production of an agricultural plant commodity shall display, at a central location, the following application-specific information while employees are employed to handle pesticides:*
> *(1) The crop or site treated and identification of the treated area;*
> *(2) The date(s) and time(s) the application started and ended;*
> *(3) Restricted entry interval;*
> *(4) Product name, U.S. EPA registration number, and active ingredients; and*
> *(5) A copy of the Safety Data Sheet(s) for the applied pesticide(s).*
> *(b) The information shall be displayed within 24 hours of the completion of an application and include all applications that have been made to any treated field on the agricultural establishment within 1/4 mile of where employees will be working. Once displayed, the information shall remain displayed until the area no longer meets the definition of a*

treated field or handler employees will no longer be on the establishment, whichever occurs earlier.

FMG Farm Contractor, Inc. training records indicate 14 of the 24 employees working at Coastal Berry - North site 21A Bronson Ranch the morning of the pesticide exposure incident received fieldworker safety training from said employer. Of the remaining ten employees, eight may or may not have received requisite training within the past year from an employer other than FMG Farm Contractor, Inc., and two did not receive said training within the past year which is a violation of 3 CCR 6764(a) and (b) that state:

(a) The employer shall assure that each employee assigned to work in a treated field has been trained within the last 12 months, in a manner the employee understands, before beginning work in the treated field.
(b) The training shall include the following information:
(1) Importance of routine decontamination and washing thoroughly after the exposure period;
(2) Restricted entry intervals and what posting means, including both California and federal field posting sign formats;
(3) Where pesticides are encountered, including treated surfaces in the field, residues on clothing, chemigation and drift;
(4) Routes of exposure;
(5) The hazards of pesticides, including acute effects, chronic and delayed effects, and sensitization effects;
(6) Common signs and symptoms of overexposure;
(7) First aid including decontamination, eye flushing, and obtaining emergency medical care;
(8) Warnings about taking pesticides or pesticide containers home;
(9) Prevention, recognition, and first aid for heat-related illness in accordance with Title 8 of the California Code of Regulations, section 3395;
(10) The hazard communication program requirements of section 6761; and
(11) Employee rights, including the right:
(A) To personally receive information about pesticides to which he or she may be exposed;
(B) For his or her physician or employee representative to receive information about pesticides to which he or she may be exposed; and
(C) To be protected against retaliatory action due to the exercise of any of his or her rights.

FMG Farm Contractor, Inc. failed to include requisite information in their fieldworker training records and thereby violated 3 CCR 6764(e) that states:

(e) The record of initial and annually required training given to the employee must include the date; employee's printed name and signature; the title(s) and source(s) of the training materials used; employer's name; and trainer's name and qualifications as specified in (f). This record shall be retained by the employer for two years at a central location at the workplace accessible to employees. The record must be provided to the employee upon request.

FMG Farm Contractor, Inc. failed to ensure five employees who reported pesticide exposure related physical symptoms to the crew foreman were taken to a physician and thereby violated 3 CCR 6766(c) that states:

> *(c) When there are reasonable grounds to suspect that an employee has a pesticide illness, or when an exposure to a pesticide has occurred that might reasonably be expected to lead to an employee's illness, the employer shall ensure that the employee is taken to a physician immediately.*

Investigative findings indicate 15 of the 24 FMG Farm Contractor, Inc. employees working at Coastal Berry - North site 1A Bronson Ranch on the morning of June 29, 2017, experienced physical symptoms as a result of exposure to pesticides applied on neighboring Garrett Farms site 1A Nugent Ranch by farm labor contractor Los Amigos Harvesting. Eight of these 15 employees received professional medical care for their symptoms. Los Amigos Harvesting failed to perform pest control in a careful and effective manner and thereby violated 3 CCR 6600(b) and (e) that state:

> *(b) Perform all pest control in a careful and effective manner.*
> *(e) Exercise reasonable precautions to avoid contamination of the environment.*

The pesticide application made by Los Amigos Harvesting to Garrett Farms site 1A Nugent Ranch on the morning of June 29, 2017, posed a reasonable possibility of (1) contaminating the bodies or clothing of nearby FMG employees; (2) contaminating private property or nontarget crops (i.e., Coastal Berry - North site 21A Bronson Ranch and crops therein); and (3) creation of a health hazard causing the illness of FMG employees and preventing normal use of said property (i.e., harvest and sale of fruit therein). Los Amigos Harvesting thereby violated 3 CCR 6614 that states:

> *(a) An applicator prior to and while applying a pesticide shall evaluate the equipment to be used, meteorological conditions, the property to be treated, and surrounding properties to determine the likelihood of harm or damage.*
> *(b) Notwithstanding that substantial drift would be prevented, no pesticide application shall be made or continued when:*
> *(1) There is a reasonable possibility of contamination of the bodies or clothing of persons not involved in the application process;*
> *(2) There is a reasonable possibility of damage to nontarget crops, animals, or other public or private property; or*
> *(3) There is a reasonable possibility of contamination of nontarget public or private property, including the creation of a health hazard, preventing normal use of such property. In determining a health hazard, the amount and toxicity of the pesticide, the type and uses of the property and related factors shall be considered.*

Los Amigos Harvesting failed to submit PURs for June 8 and 9, 2017, within seven days of completion of the pesticide application and thereby violated 3 CCR 6626(b) that states:

> *(b) An agricultural pest control business shall report the use of pesticides applied by it for the production of an agricultural commodity to the commissioner of the county in which the pest control was performed. This report must be submitted within seven days of completion of the pesticide application. A copy of the report shall be sent by the business*

to the operator of the property where the pest control was done within 30 days of completion of the pesticide application.

Los Amigos Harvesting failed to assure their employee pesticide handler M. GALVAN's compliance with laws and regulations (i.e., FAC 12973 and 3 CCR 6614) when performing pest control and thereby violated 3 CCR 6702(a) and (b)(3) and (5) that states:

(a) The employer shall comply with each regulation in this subchapter which is applicable to the employer's action or conduct.
(b) The employer:
(3) shall assure safe work practices, including all applicable regulations and pesticide product labeling requirements, are complied with;
(5) shall assure that employees handle and use pesticides in accordance with the requirements of law, regulations, and pesticide product labeling requirements.

Los Amigos Harvesting employee pesticide handler training records regarding M. GALVAN and J. RESENDIZ do not list spray adjuvant Widespread Max as a pesticide for which training was provided and thereby violated 3 CCR 6724(b) that states:

The employer shall assure that employees who handle pesticides have been trained pursuant to the requirements of this section and that all other provisions of this section have been complied with for employees who handle pesticides.
(b) The training shall cover, for each pesticide or chemically similar group of pesticides, to be used:

Los Amigos Harvesting provided primary direction and control over the pesticide use related work, services or activities of their employee pesticide handler M. GALVAN and was therefore operating a pest control business without first obtaining a valid pest control business license and thereby violated FAC 11701 that states:

It is unlawful for a person to advertise, solicit, or operate as a pest control business, unless the person has a valid pest control business license issued by the director.

Los Amigos Harvesting operated a pest control business in Santa Cruz County without first registering as such with the Santa Cruz CAC and thereby violated FAC 11732 that states:

It is unlawful for any person to advertise, solicit, or operate as a pest control business in any county unless the person has registered with the commissioner for the current calendar year.

Los Amigos Harvesting's use of pesticides DiPel DF, Pristine Fungicide and Rally 40 WSP was in conflict with the products' label statement "Do not apply this product in a way that will contact workers or other persons, either directly or through drift" and thereby violated FAC 12973 that states:

The use of any pesticide shall not conflict with labeling registered pursuant to this chapter which is delivered with the pesticide or with any additional limitations applicable to the conditions of any permit issued by the director or commissioner.

ATTACHMENTS

1. ASABE S572.1 Droplet Size Calculation, American Society of Agricultural and Biological Engineers, Standard S572.1
2. California Code of Regulations, referenced sections
3. California Food and Agricultural Code, referenced sections
4. California Restricted Material Permit, #44-17-27P192A, Coastal Berry - North
5. California Restricted Material Permit, #44-17-440168A, Garrett Farms
6. Doctor's First Report of Occupational Injury or Illness (1 each) and Pesticide Incident Reports (6 each), alphabetical order
7. E-mail, The Saqui Law Group, December 15, 2017
8. *Farm Labor Contractor - Determining When a Pest Control Business License is Required by a Farm Labor Contractor*, PML 01-12, California Department of Pesticide Regulation
9. Field Worker Safety Inspection Report, #103-44-17-M002-013, FMG Farm Contractor, Inc.
10. Field Worker Safety Inspection Report, #103-44-17-M002-014, Los Amigos Harvesting
11. Field worker training records, FMG Farm Contractor, Inc.
12. Handler training program, Garrett Farms, employees Galvan, M. and Resendiz, J. (includes records)
13. Handler training program, Los Amigos Harvesting, employees Galvan, M. and Resendiz, J. (includes records)
14. Incident Report, Watsonville Fire Department, #2017-1001690 (includes Watsonville Fire Department document entitled Prehospital Care Report and memorandum requesting information)
15. Investigative Sample Analysis Report, samples #R17C00290, #R17C00291, #R17C00292, #R17C00293, #R17C00294, R17C000295 (includes sampling map)
16. Label, DiPel DF Biological Insecticide, EPA Reg. No. 73049-39, pages 1 and 2 of 2
17. Label, Pristine Fungicide, EPA Reg. No. 7969-199, pages 1-3, 9, 12 and 13 of 33
18. Label, Rally 40WSP, EPA Reg. No. 62719-410, pages 1-3, 5 and 27-31 of 80
19. Label, Widespread Max, CA Reg. No. 34704-5006I, pages 1, 2 and 3 of 3
20. List of Crew, FMG Farm Contractor, Inc., Coastal Berry - North Bronson Ranch site 21A, June 29, 2017 (includes annotated version of Personnel List)
21. Map, lot identification, Coastal Berry - North, Bronson Ranch, site 21A
22. Medical Records, seven total, alphabetical order (include Medical Information Authorization forms and faxes requesting information)
23. *Pesticide Use Enforcement Program Standards Compendium*, Volume 8, CDPR, Section 6.7 - Employer Identification, pages 6-16 to 6-19
24. Pesticide Use Reports, Coastal Berry - North, June 2017 (includes application-specific information and CalAgPermits database information)
25. Pesticide Use Reports, Garrett Farms, June 2017 (includes application-specific information and CalAgPermits database information)
26. Photographs, pesticide exposure incident site, June 29, 2017
27. Prehospital Care Reports, American Medical Response of Santa Cruz County, 5 each, alphabetical order (includes memorandum requesting information)
28. Recommendation, #6649, Daniel Schmida, PCA, Garrett Farms June 29, 2017 pesticide application (includes single page annotated version)
29. Registration, Farm Labor Contractor, Santa Cruz County, FMG Farm Contractor, Inc., License # FLC000185517, year 2017

30. Registration, Farm Labor Contractor, Santa Cruz County, Los Amigos Harvesting, License # FLC000234426, year 2017
31. Safety Data Sheets, pesticides DiPel DF Biological Insecticide (pages 1-3, 6 and 7 of 11), Pristine Fungicide (page 1-4 and 8 of 12), Rally 40WSP (pages 1-3, 8 and 10 of 14), Widespread Max (pages 1, 2 and 4 of 6), alphabetical order
32. Weather report, June 29, 2017, California Irrigation Management System

Report submitted by,

Shane DeVine
Agricultural Biologist III
April 26, 2018

From: Tina Levine
To: King, Marquea; Knott, Steven
Subject: A couple of questions
Date: Monday, June 25, 2018 1:54:05 AM

Hi guys,

It's been a while. I have been working with Bill Jordan on following the revisions to the Agricultural Worker Safety Rule and Certification Standards. Rules are generally sent to the SAP before they go to OMB for review. These rules are currently at OMB. But we don't think they have been sent to SAP for review. I am writing to confirm this.

We think there are some important scientific issues that would benefit from SAP review so we are urging the SAP not to waive the review of these rules. We will be drafting a letter to this effect.

In addition, i was communicating with Marion Ehrich about this and she told me she was leaving the SAP on July 1. Are other "permanent" members leaving? Have replacement(s) been named?

Thanks.

Tina Levine

Certain browser plug-ins or extensions, such as Grammarly, may interfere with submitting comments on the comment form. If you have issues, please disable browser plugins and extensions and try submitting your comment again. If you need additional assistance, please contact the Help Desk at 1-877-378-5457.

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Comment submitted by W. Jordan

The is a Comment on the **Environmental Protection Agency** (EPA) Notice: **Meetings: Federal Insecticide, Fungicide, and Rodenticide Act Scientific Advisory Panel; Nominations of Ad Hoc Panel Members**

For related information, **Open Docket Folder**

Comment Period Closed
Mar 19 2018, at 11:59 PM ET

ID: EPA-HQ-OPP-2017-0693-0037
Tracking Number: 1k2-9240-jadn

Document Information

Date Posted:
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Comment

To the Members of the FIFRA Science Advisory Panel:

As you may know, in late December 2017, the Environmental Protection Agency ("EPA") announced that it has started to prepare two rulemakings to modify requirements in the Agricultural Worker Protection Standard ("WPS") and Certification of Pesticide Applicators rule (CPA). See 82 Fed. Reg. 60, 195 (Dec. 19, 2017); 82 Fed. Reg. 60,576 (Dec. 21, 2017). The WPS and CPA rules, which were updated in 2015 and 2017 following lengthy public engagement processes, are vital to the protection of the environment and public health - especially the health of children, women and men who labor in agriculture and who apply restricted use pesticides in agricultural, commercial and residential settings. Of great concern, the proposal to revise these rules will weaken protections for children who work in the fields or who mix, load and apply pesticides.

As you know, the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") requires that the FIFRA Scientific Advisory Panel be given 60 days to "comment as to the impact on health and the environment" of drafts of proposed FIFRA rules. 7 U.S.C. 136w(d)(1). With the lives of children and families and the quality of the environment at stake, we write to strongly urge you to conduct an in-depth scientific review of the health and environmental impacts of the proposed weakening of these rules on farmworkers, especially farmworkers who are under the age of 18, their families, and rural communities. In particular, we ask that

you: 1) conduct a full review of the draft proposals to modify the WPS and CPA rules; 2) add these matters to the agenda of one of the SAP's public meetings - either a meeting devoted exclusively to these matters or to the agenda of the upcoming meeting in May 2018; and 3) issue written findings on your conclusions.

Thank you very much for your consideration.
William Jordan

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FEDERAL REGISTER

Vol. 80 Monday,
No. 211 November 2, 2015

Part II

Environmental Protection Agency

40 CFR Part 170
Pesticides; Agricultural Worker Protection Standard Revisions; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR 170

[EPA–HQ–OPP–2011–0184; FRL–9931–81]

RIN 2070–AJ22

Pesticides; Agricultural Worker Protection Standard Revisions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is finalizing updates and revisions to the existing worker protection regulation for pesticides. This final rule will enhance the protections provided to agricultural workers, pesticide handlers, and other persons under the Worker Protection Standard (WPS) by strengthening elements of the existing regulation, such as training, notification, pesticide safety and hazard communication information, use of personal protective equipment, and the providing of supplies for routine washing and emergency decontamination. EPA expects this final rule to prevent unreasonable adverse effects from exposure to pesticides among agricultural workers and pesticide handlers, vulnerable groups (such as minority and low-income populations, child farmworkers, and farmworker families) and other persons who may be on or near agricultural establishments, and to mitigate exposures that do occur. In order to reduce compliance burdens for family-owned farms, in the final rule EPA has expanded the existing definition of "immediate family" and continued the existing exemption from many provisions of the WPS for owners and members of their immediate families.

DATES: This final rule is effective January 1, 2016. Agricultural employers and handler employers will be required to comply with most of the new requirements on January 2, 2017, as provided in 40 CFR 170.2. Agricultural employers and handler employers will be required to comply with certain new requirements on January 1, 2018 or later, as provided in 40 CFR 170.311(a)(3), 170.401(c)(3), 170.501(c)(3) and 170.505(b).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2011–0184, is available at *http://www.regulations.gov* or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC 20460–0001. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the OPP Docket is (703) 305–5805. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Jeanne Kasai, Field and External Affairs Division (7506P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (703) 308–3240; email address: *kasai.jeanne@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Executive Summary

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

This action is issued under the authority of sections 2 through 35 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. 136–136y, and particularly section 25(a), 7 U.S.C. 136w(a).

B. What is the purpose of the regulatory action?

EPA is revising the existing Worker Protection Standard (WPS), 40 CFR part 170, to reduce occupational pesticide exposure and incidents of related illness among agricultural workers (workers) and pesticide handlers (handlers) covered by the rule, and to protect bystanders and others from exposure to agricultural pesticide use. This regulation, in combination with other components of EPA's pesticide regulatory program, is intended to prevent unreasonable adverse effects of pesticides among workers, handlers and other persons who may be on or near agricultural establishments, including vulnerable groups, such as minority and low-income populations.

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

This final rule revises the existing WPS. Some significant changes are described in this Unit. Units V. through XIX. discuss in more detail the proposed rule, public comments submitted, EPA's responses to the public comments, and final regulatory requirements.

In regard to training, the final rule retains the proposed content expansions (including how to protect family members and reduce take-home exposure) and the requirement for employers to ensure that workers and handlers receive pesticide safety training every year. Employers are required to retain records of the training provided to workers and handlers for two years from the date of training. The final rule eliminates the training "grace period," which allowed employers to delay providing full pesticide safety training to workers (for up to 5 days under the existing rule and for up to two days under the proposal) from the time worker activities began, if the workers received an abbreviated training prior to entering any treated area.

In regard to notification, the final rule retains the proposed requirements for employers to post warning signs around treated areas in outdoor production when the product used has a restricted-entry interval (REI) greater than 48 hours and to provide to workers performing early-entry tasks, *i.e.*, entering a treated area when an REI is in effect, information about the pesticide used in the area where they will work, the specific task(s) to be performed, the personal protective equipment (PPE) required by the labeling and the amount of time the worker may remain in the treated area. The final rule does not include the proposed requirement for employers to keep a record of the information provided to workers performing early-entry tasks. The final rule retains the existing requirements concerning the sign that must be used when posted notification of treated areas is required.

In regard to hazard communication, the final rule requires employers to post pesticide application information and a safety data sheet (SDS) for each pesticide used on the establishment (known together as pesticide application and hazard information) at a central location on the establishment (the "central display"), a departure from the proposal to eliminate the existing requirement for a central display of pesticide application-specific information. The final rule also requires the employer to maintain and make available to workers and handlers, their designated representatives, and treating medical personnel upon request, the pesticide application-specific information and the SDSs for pesticides used on the establishment for two years. The final rule does not include the proposed requirement for the employer to maintain copies of the labeling for each product used on the establishment for two years.

In regard to protections during pesticide applications, the final rule designates the area immediately surrounding the application equipment as the area from which workers and other persons must be excluded. This "application exclusion zone" differs

from the proposed "entry-restricted areas," which would have extended a specified distance around the entire treated area during application based on the application equipment used. The final rule requires handlers to suspend application, rather than cease application, if they are aware of any person in the application exclusion zone other than a properly trained and equipped handler involved in the application.

In regard to establishing a minimum age for handlers and workers performing early-entry tasks, the final rule requires that handlers and workers performing early-entry tasks be at least 18 years old, rather than the proposed minimum age of 16 years old. This minimum age does not apply to an adolescent working on an establishment owned by an immediate family member. The final rule does not require the employer to record workers' or handlers' birthdates as part of the training record, but does require the employer to verify they meet the minimum age requirements.

In regard to PPE, the final rule cross-references certain Occupational Safety and Health Administration's (OSHA) requirements for respirator use that employers will be required to comply with, *i.e.*, fit test, medical evaluation, and training for handlers using pesticides that require respirator use. The final rule expands the respirators subject to fit testing beyond the proposal to include filtering facepiece respirators. The final rule maintains the existing exception from the handler PPE requirements when using a closed system to transfer or load pesticides, and adopts a general performance standard for closed systems, which differs from the specific design standards based on California's existing standard for closed systems discussed in the proposal.

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

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

Category	Description	Source
Monetized Benefits Avoided (Acute Pesticide Incidents).	$0.6–2.6 million/year after adjustment for underreporting of pesticide incidents	EA Chapter 4.5.
Qualitative Benefits	Willingness to pay to avoid acute effects of pesticide exposure beyond cost of treatment and loss of productivity.	EA Chapter 4.
	Reduced latent effects 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.	
Monetized Costs	$60.2–66.9 million/year	EA Chapter 3.3.
Small Business Impacts	No significant impact on a substantial number of small entities	EA Chapter 3.5.
	The rule will affect over 295,000 small farms, nurseries, and greenhouses, and commercial entities that are contracted to apply pesticides.	
	Impact less than 0.1% of the annual value of sales or revenues for the average small entity.	
Impact on Jobs	The rule will have a negligible effect on jobs and employment	EA Chapter 3.4.
	The marginal cost of a typical farmworker is expected to increase $5/year	
	The marginal cost for a more skilled pesticide handler is expected to increase by $50 per year, but this is less than 0.2% of the cost of a part-time employee.	

II. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you work in or employ persons working in crop production agriculture where pesticides are applied. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

• Agricultural Establishments (NAICS code 111000), *e.g.*, establishments or persons, such as farms, orchards, groves, greenhouses, and nurseries, primarily engaged in growing crops, plants, vines, or trees and their seeds.

• Nursery and Tree Production (NAICS code 111421), *e.g.*, establishments or persons primarily engaged in (1) growing nursery products, nursery stock, shrubbery, bulbs, fruit stock, sod, and so forth, under cover or in open fields and/or (2) growing short rotation woody trees with a growth and harvest cycle of 10 years or less for pulp or tree stock.

• Timber Tract Operations (NAICS code 113110), *e.g.*, establishments or persons primarily engaged in the operation of timber tracts for the purpose of selling standing timber.

• Forest Nurseries and Gathering of Forest Products (NAICS code 113210), *e.g.*, establishments or persons primarily engaged in (1) growing trees for reforestation and/or (2) gathering forest products, such as gums, barks, balsam needles, rhizomes, fibers, Spanish moss, ginseng, and truffles.

• Farm Workers (NAICS codes 11511, 115112, and 115114), *e.g.*, establishments or persons primarily engaged in providing support activities for growing crops; establishments or persons primarily engaged in performing a soil preparation activity or crop production service, such as plowing, fertilizing, seed bed preparation, planting, cultivating, and crop protecting services; and establishments or persons primarily engaged in performing services on crops, subsequent to their harvest, with the intent of preparing them for market or further processing.

• Pesticide Handling on Farms (NAICS code 115112), *e.g.*, establishments or persons primarily engaged in performing a soil preparation activity or crop production service, such as seed bed preparation, planting, cultivating, and crop protecting services.

• Farm Labor Contractors and Crew Leaders (NAICS code 115115), *e.g.*, establishments or persons primarily engaged in supplying labor for agricultural production or harvesting.

• Pesticide Handling in Forestry (NAICS code 115310), *e.g.*, establishments or persons primarily providing support activities for forestry, such as forest pest control.

• Pesticide Manufacturers (NAICS code 325320), *e.g.*, establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

• Farm Worker Support Organizations (NAICS codes 813311, 813312, and 813319), *e.g.*, establishments or persons primarily engaged in promoting causes associated with human rights either for a broad or specific constituency; establishments or persons primarily engaged in promoting the preservation and protection of the environment and wildlife; and establishments primarily engaged in social advocacy.

• Farm Worker Labor Organizations (NAICS code 813930), *e.g.*, establishments or persons primarily engaged in promoting the interests of organized labor and union employees.

• Crop Advisors (NAICS codes 115112, 541690, 541712) *e.g.*, establishments or persons who primarily provide advice and assistance to businesses and other organizations on scientific and technical issues related to pesticide use and pest pressure.

B. What action is the Agency taking?

EPA is finalizing changes to the WPS. The WPS is a regulation primarily intended to reduce the risks of injury or illness resulting from agricultural workers' and handlers' use and contact with pesticides on farms, forests, nurseries and greenhouses. The rule primarily seeks to protect workers (those who perform hand-labor tasks in pesticide-treated crops, such as harvesting, thinning, pruning) and handlers (those who mix, load and apply pesticides). The rule does not cover persons working with livestock. The existing regulation has provisions requiring employers to provide workers and handlers with pesticide safety training, posting and notification of treated areas, and information on entry restrictions, as well as PPE for workers who enter treated areas after pesticide application to perform crop-related tasks and handlers who mix, load, and apply pesticides.

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

EPA believes that the changes to the WPS offer targeted improvements that will reduce risk through protective requirements and improve operational efficiencies. Among other things, EPA expects the changes to:

• Improve effectiveness of worker and handler training.

• Improve protections to workers during REIs.

• Improve protections for workers during and after pesticide applications.

• Expand the information provided to workers, thus improving hazard communication protections.

• Expand the content of pesticide safety information displayed to improve the display's effectiveness.

• Improve the protections for crop advisor employees.

• Increase the amounts of decontamination water available, thus improving the effectiveness of the decontamination process.

• Improve the emergency response when workers or handlers experience pesticide exposures.

• Improve the organization of the WPS, thus making it easier for employers to understand and comply with the rule.

• Clarify that workers and handlers are covered by the rule only if they are employed, directly or indirectly, by the establishment (*i.e.*, receiving a salary or wage).

• Protect adolescents by establishing a minimum age for handlers and for workers who enter a treated area during an REI, but adding an exemption to the minimum age requirement for adolescents who work on an establishment owned by an immediate family member.

• Improve flexibility for small farmers and members of their immediate family by expanding the definition of immediate family members to be more inclusive and retaining the exemptions from almost all WPS requirements for owners and their immediate family members.

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

EPA estimates the incremental cost of the revisions to the WPS to be between $60.2 and $66.9 million per year, given a three percent discount rate. Using a seven percent discount rate, the rule is estimated to cost between $56.2 and $66.9 million per year. The majority of the costs, $53.0 to $62.2 million per year, are borne by farms, nurseries, and greenhouses that hire labor and use pesticides, which account for about 20 percent of all farms producing crops in the United States. The approximately 2,000 commercial pesticide handling establishments, which are contracted to apply pesticides on farms, may collectively see an incremental cost of about $1.9 million per year. Family-owned farms that use pesticides and do not hire labor may collectively bear costs of about $1.4 million per year. Total costs amount to an average expenditure of about $30 per year per farm worker. Benefits, in terms of reduced illness from exposure to pesticides, are likely to exceed $64 million per year in terms of avoided costs associated with occupational pesticide incidents and with reductions in chronic diseases associated with occupational pesticide exposure, although the amount EPA can quantify is much less. The estimated quantified benefits from reducing acute worker and handler exposure to pesticides total between $0.6 million and $2.6 million annually.

The changes to the current WPS requirements are expected to lead to an overall reduction in incidents of unsafe pesticide exposure and to improve the occupational health of the nation's agricultural workers and pesticide handlers. This section provides an overview of the qualitative benefits of the proposal and the estimated benefits that would accrue from avoiding acute pesticide exposure in the population protected by the WPS. It also provides an estimate of the number of chronic illnesses with a plausible association with pesticide exposure that would have to be prevented by the rule changes in order for the total estimated benefits to meet the estimated cost of the proposal.

A sizeable portion of the agricultural workforce may be exposed occupationally to pesticides and pesticide residues. These exposures can pose significant long- and short-term health risks. It is difficult to quantify a specific level of risk and project the risk reduction that would result from this rule, because workers and handlers are potentially exposed to a wide range of pesticides with varying toxicities and risks. However, there is strong evidence that workers and handlers may be exposed to pesticides at levels that can cause adverse effects and that both the exposures and the risks can be substantially reduced. EPA believes the provisions in the final rule will reduce pesticide exposures and the associated risks.

The estimated quantified benefits from reducing acute worker and handler exposure to pesticides total between $0.6 million and $2.6 million annually (Ref. 1). This conservative estimate includes only the avoided costs in medical care and lost productivity to workers and handlers and assumes that just 10% of acute pesticide incidents are reported. It does not include quantification of the reduction in chronic effects of pesticide exposure to workers and handlers, reduced effects of exposure, including developmental impacts, to children and pregnant

workers and handlers or willingness to pay to avoid symptoms of pesticide exposure. Because the chronic effects of pesticide exposures are seldom attributable to a specific cause, and thus are unlikely to be recorded in pesticide poisoning databases, EPA is not able to quantify the benefits expected to accrue from the final WPS changes that are expected to reduce chronic exposure to pesticides. However, associations between pesticide exposure and certain cancer and non-cancer chronic health effects are well documented in the peer-reviewed literature, and reducing these chronic health effects is an important FIFRA goal.

Even if the lack of quantitative data impairs the reliability of estimates of the total number of chronic illnesses avoided, it is reasonable to expect that the proposed changes to the WPS will reduce pesticide exposure, and thereby reduce the incidence of chronic disease associated with pesticide exposure. Therefore, EPA conducted a "break even" analysis to consider the plausibility of the changes to the WPS reducing the incidence of chronic disease enough to cause the net benefits of the proposed rule to exceed its anticipated costs. Under this analysis, EPA looked at the costs associated with non-Hodgkin's lymphoma, prostate cancer, Parkinson's disease, lung cancer, bronchitis, and asthma and their frequency among agricultural workers, and found that reducing the incidence of lung cancer by 0.078% and the incidence of the other chronic diseases by 0.78% per year (about 44 total cases per year among the population of workers and handlers protected under the WPS) would produce quantified benefits sufficient to bridge the gap between the quantified benefits from reducing acute incidents and the final rule's estimated high-end cost of $66.9 million. Overall, the weight of evidence suggests that the requirements will result in long-term health benefits to agricultural workers and pesticide handlers in excess of the less than 1% reduction in just six diseases that corresponds with the break-even point for the final rule, not only by reducing their daily risk of pesticide exposures, but also by improving quality of life throughout their lives, resulting in a lower cost of health care and a healthier society.

The changes to the current WPS requirements, specifically improved training on reducing pesticide residues brought from the treated area to the home on workers' and handlers' clothing and bodies and establishing a minimum age for handlers and early entry workers, other than those covered by the immediate family exemption, mitigate the potential for children to be exposed to pesticides directly and indirectly. The unquantified benefit to adolescent workers and handlers, as well as children of workers and handlers is great; reducing exposure to pesticides could translate into fewer sick days, fewer days missed of school, improved capacity to learn, and better long-term health. Parents and caregivers reap benefits by having healthier families, fewer missed workdays, and better quality of life.

By finalizing several interrelated exposure-reduction measures, the rule is expected to avoid or mitigate approximately 44 to 73% of annual reported acute WPS-related pesticide incidents. EPA believes the final rule will substantially reduce for these workers and handlers the potential for adverse health effects (acute and chronic) from occupational exposures to such pesticides and their residues. These measures include requirements intended to reduce exposure by:

- Ensuring that workers and handlers are informed about the hazards of pesticides—the final rule changes the content and frequency of required pesticide safety training, as well as making changes to ensure that the pesticide safety training is more effective.
- Reducing exposure to pesticides—among other things, the final rule changes and clarifies the requirements for personal protective equipment. It also makes changes to the timing of applications when people are nearby. These and other provisions should directly reduce exposure in the agricultural workforce.
- Mitigating the effects from exposures that occur—some accidental exposures are inevitable. EPA expects the final rule will mitigate the severity of health impacts by updating and clarifying what is required to respond to exposures.

Further detail on the benefits of this proposal is provided in the document titled "Economic Analysis of the Agricultural Worker Protection Standard Revisions" which is available in the docket for this rulemaking (Ref. 1).

III. Introduction and Procedural History

The existing WPS was published in 1992 and implemented fully in 1995. Since implementation, EPA has sought to ensure that the rule provides the intended protections effectively and to identify necessary improvements. To accomplish this, EPA engaged diverse stakeholders, individually and collectively through organized outreach efforts, to discuss the rule and get feedback from affected and interested parties. Groups with which EPA engaged included, but were not limited to, farmworker organizations, health care providers, state regulators, educators and trainers, pesticide manufacturers, farmers, organizations representing agricultural commodity producers and crop advisors. EPA engaged these groups formally through the National Assessment of the Pesticide Worker Safety Program (*http://www.epa.gov/pesticides/safety/workshops.htm*), public meetings (*e.g.*, National Dialogue on the Worker Protection Standard), federal advisory committee meetings (*e.g.*, Pesticide Program Dialogue Committee, *http://www.epa.gov/pesticides/ppdc/*) and a Small Business Advocacy Review Panel (Ref. 3). EPA also engaged stakeholders informally, as individual organizations and in small groups.

Using feedback from stakeholders, along with other information, EPA developed proposed changes to the WPS and published them for public comment (Ref. 2). EPA received substantial feedback on the proposal, including about 2,400 written comments with over 393,000 signatures. Commenters included farmworker advocacy organizations, state pesticide regulatory agencies (states) and organizations, public health organizations, public health agencies, growers and grower organizations, agricultural producer organizations, applicators and applicator organizations, pesticide manufacturers and organizations, PPE manufacturers, farm bureaus, crop consultants and organizations, and others. The comments received covered a wide range of issues and took diverse positions. Overall, the comments were thoughtful and demonstrated a high level of interest in ensuring the protection of workers and handlers, while minimizing burden on employers and regulatory agencies. This document discusses some of the significant comments received and EPA's responses. A full summary of comments received and EPA's responses are available in the docket for this rulemaking (Ref. 4).

While considering stakeholder feedback and suggestions in developing the final rule, EPA also gathered additional information, such as updated demographic information for farmworkers, new data from the U.S. Department of Agriculture's (USDA) National Agricultural Statistics Service, information on other federal rules (*e.g.*, respirator standards, anti-retaliatory provisions), and more recent data on

incidents related to occupational pesticide exposure in agriculture. EPA reviewed the methodology used to estimate the number of acute pesticide-related incidents in agriculture and used the updated information to revise the estimated number of incidents that could be prevented under the final rule. EPA also revised the Economic Analysis for the final rule to include more recent information from the National Agricultural Statistics Service and with input from public comments.

IV. Context and Goals of This Rulemaking

A. Context for This Rulemaking

1. Statutory authority. Enacted in 1947, FIFRA established a framework for the pre-market registration and regulation of pesticide products; since 1972, FIFRA has prohibited the registration of pesticide products that cause unreasonable adverse effects. FIFRA makes it unlawful to use a pesticide in a manner inconsistent with the labeling and gives EPA's Administrator authority to develop regulations to carry out the Act. FIFRA's legislative history indicates that Congress specifically intended for FIFRA to protect workers and other persons from occupational exposure directly to pesticides or to their residues (Ref. 5).

Under FIFRA's authority, EPA has implemented measures to protect workers, handlers, other persons, and the environment from pesticide exposure in two primary ways. First, EPA includes specific use instructions and restrictions on individual pesticide product labeling. These instructions and restrictions are the result of EPA's stringent registration and reevaluation processes and are based on the risks of the particular product. Since users must comply with directions for use and restrictions on a product's labeling, EPA uses the labeling to convey mandatory requirements for how the pesticide must be used to protect people and the environment from unreasonable adverse effects of pesticide exposure. Second, EPA enacted the WPS to expand protections against the risks of agricultural pesticides without making individual product labeling longer and much more complex. The WPS is a uniform set of requirements for workers, handlers and their employers that are generally applicable to all agricultural pesticides and are incorporated onto agricultural pesticide labels by reference. Its requirements complement the product-specific labeling restrictions and are intended to minimize occupational exposures generally.

2. EPA's regulation of pesticides. EPA uses a science-based approach to register and re-evaluate pesticides, in order to protect human health and the environment from unreasonable adverse effects that might be caused by 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. EPA also requires a copy of the proposed labeling, including directions for use and appropriate warnings.

Once an application for a new pesticide product is received, EPA conducts an evaluation, which includes a detailed review of scientific data to determine the potential impact on human health and the environment. EPA considers the risk assessments and results of any peer review, and evaluates potential risk management measures that could mitigate risks that exceed EPA's level of concern. In the registration process, EPA evaluates the proposed use(s) of the pesticide to determine whether it would cause adverse effects on human health, non-target species, and the environment. In evaluating the impact of a pesticide on occupational health and safety, EPA considers the risks associated with use of the pesticide (occupational, environmental) and the benefits associated with use of the pesticide (economic, public health, environmental). However, FIFRA does not require EPA to balance the risks and benefits for each audience. For example, a product may pose risks to workers, but risk may nevertheless be reasonable in comparison to the economic benefit of continued use of the product to society at large.

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 any applicable requirements under the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 321 *et seq.*, EPA approves the registration subject to any risk mitigation measures necessary to meet the FIFRA registration criteria. 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.

When EPA approves a pesticide, the labeling generally reflects all risk mitigation measures required by EPA. The risk mitigation measures may include requiring certain engineering controls, such as the 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 establishing REIs during which entry into an area treated with the pesticide is generally prohibited until residue levels have declined to levels unlikely to cause unreasonable adverse effects. Because users must comply with the directions for use and use restrictions on a product's labeling, EPA uses the labeling to establish and convey mandatory requirements for how the pesticide must be used to protect the applicator, the public, and the environment from pesticide exposure.

Under FIFRA, EPA is required to review periodically the registration of pesticides currently registered in the United States. The 1988 FIFRA amendments required EPA to establish a pesticide reregistration program. Reregistration was a one-time comprehensive review of the human health and environmental effects of pesticides first registered before November 1, 1984 to make decisions about these pesticides' future use. The 1996 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 (Ref. 16). 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," additional risk reduction measures had to be put in place. For a number of pesticides, measures intended to reduce exposure to handlers and workers 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) for restricted use only by certified applicators; requiring the use of specific PPE; establishing specific REIs; and improving use directions. During this process, EPA also encouraged registrants to find replacements for the inert ingredients of greatest concern. As a result of EPA's reregistration efforts, current U.S. farm workers are not exposed to many of the previously used inert ingredients that were of the greatest toxicological concern.

EPA's registration review program is a recurring assessment of products against current standards. 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 and pesticides initially registered in 1984 or later are all subject to registration review.

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 those risks. EPA implements the risk reduction and mitigation measures identified in the pesticide reregistration and registration review programs through amendments to individual pesticide product labeling.

3. WPS. The WPS regulation is incorporated by reference on certain pesticide product labeling through a statement in the agricultural use box. The WPS provides a comprehensive collection of pesticide management practices generally applicable to all agricultural pesticide use scenarios in crop production, complementing the product-specific requirements that appear on individual pesticide product labels.

The risk reduction measures of the WPS may be characterized as being one of three types: Information, protection and mitigation. To ensure that employees will be informed about exposure to pesticides, the WPS requires that workers and handlers receive training on general pesticide safety, and that employers provide access to information about the pesticides with which workers and handlers may have contact. To protect workers and handlers from pesticide exposure, the WPS prohibits the application of pesticides in a manner that exposes workers or other persons, generally prohibits workers and other persons from being in areas being treated with pesticides, and generally prohibits workers from entering a treated area while an REI is in effect (with limited exceptions that require additional protections). In addition, the rule protects workers by requiring employers to notify them about areas on the establishment treated with pesticides, through posted and/or oral warnings. The rule protects handlers by ensuring that they understand proper use of and have access to required PPE. Finally, the WPS has provisions to mitigate exposures if they do occur by requiring the employer to provide to workers and handlers with an ample supply of water, soap and towels for routine washing and emergency decontamination. The employer must also make transportation available to a medical care facility if a worker or handler may have been poisoned or injured by a pesticide and provide information about the pesticide(s) to which the person may have been exposed.

EPA manages the risks and benefits of each pesticide product primarily through the labeling requirements specific to each pesticide product. If pesticide products are used according to the labeling, EPA does not expect use to cause unreasonable adverse effects. However, data on incidents of adverse effects to human health and the environment from the use of agricultural pesticides show that users do not always comply with labeling requirements. Rigorous ongoing training, compliance assistance and enforcement are needed to ensure that risk mitigation measures are appropriately implemented in the field. The framework provided by the WPS is critical for ensuring that the improvements brought about by reregistration and registration review are realized in the field. For example, the requirement for handlers to receive instruction on how to use the pesticide and the application equipment for each application is one way to educate handlers about updated requirements on product labeling to ensure they use pesticides in a manner that will not harm themselves, workers, the public or the environment. In addition, the REIs are established through individual product labeling, but action needs to be taken at the use site to ensure that workers are aware of areas on the establishment where REIs are in effect and given directions to be kept out of the treated area while the REI is in effect. The changes to the WPS are designed to enhance the effectiveness of the existing structure of protections and to better realize labeling-based risk mitigation measures at the field level.

B. Goals of This Rulemaking

Discussions with stakeholders over many years, together with EPA's review of incident data, led EPA to identify several shortcomings in the current regulation that will be addressed by this final rule. As discussed in Unit IV.A., EPA uses both product-specific labeling and the WPS to effectuate occupational protections for workers and handlers. EPA engages in ongoing reviews and reassessments of pesticide products to ensure they continue to meet the standard of not causing unreasonable adverse effects to human health and the environment. The WPS must be updated to ensure that the rule continues to complement the labeling-based protections and to address issues identified through experience with the WPS, and review of incident data and stakeholder engagement.

1. Purpose of the WPS. The WPS is intended to reduce the risks associated with occupational pesticide exposure to workers, handlers and their families, and to protect others and the environment from risks of pesticide use in agricultural production. The rule makes employers of workers and handlers responsible for providing protections to workers and handlers on their establishments. By imposing this obligation, EPA seeks to ensure those who make pesticide use decisions (employers) internalize the effects of their decisionmaking rather than passing on the costs associated with these decisions (risks of pesticide exposure) to others (workers and handlers).

As noted in Unit IV.A., the components of the WPS generally can be grouped into three categories: Information, protection, and mitigation. Employers must provide workers and handlers with information needed to protect themselves, others, and the environment from pesticides and pesticide residues through pesticide safety training, pesticide application and hazard information, and access to labeling. Employers must provide protections to workers and handlers during and after applications in order to minimize potential for exposure. Finally, employers must be prepared to mitigate exposures that do occur by providing supplies for washing and emergency decontamination, and emergency transportation to a medical facility if necessary. These elements are

necessary to implement product-specific labeling requirements effectively. For example, pesticide safety training informs workers that areas treated with pesticides are off limits for entry for a certain period after the application, *i.e.*, a product-specific REI, and that their employers will inform them of where and when REIs are in effect and entry into the treated areas is prohibited. In some instances, employers must provide further protection by posting warning signs at treated areas while REIs are in effect to remind workers to keep out of the treated areas. For handlers, training informs them about basic pesticide safety and handling precautions and reducing the potential to expose themselves or others. In addition, the employer must provide information for each application, informing the handler about the product-specific labeling restrictions and requirements.

In summary, the WPS works in conjunction with product labeling to protect workers and handlers from occupational pesticide exposure. The rule imposes on the employer the responsibility for providing protections to workers and handlers and to ensure they have access to information necessary to protect themselves and others during and after pesticide application.

2. Surveillance data. When EPA promulgated the existing rule, it used existing data on occupational pesticide-related incidents to estimate that that approximately 10,000 to 20,000 incidents of physician-diagnosed (not hospitalized) pesticide poisonings occurred in the WPS-covered workforce annually. For this rulemaking, EPA estimates that about 1,810 to 2,950 acute pesticide exposure incidents occur annually on agricultural establishments that potentially could be prevented by the WPS. This substantial drop in the estimated number of incidents shows that the existing rule and efforts by employers, workers and handlers have made great accomplishments in reducing pesticide exposure for workers and handlers. Pesticide use in agriculture is safer than it was 20 years ago.

Current occupational health incident surveillance data show, however, that avoidable incidents continue to occur. For example, some of the occupational pesticide illnesses reported to state health agencies have occurred when workers entered a treated area before the REI expired. Although employers are obligated to warn workers to keep out of treated areas and to ensure that workers receive training on and information about treated areas, incidents continue to occur. Another example of potentially avoidable exposure is spray drift. Labeling instructs handlers to apply pesticides in a manner that does not contact other persons, but pesticide drift continues to cause exposure incidents. In addition to surveillance data, studies also show that pesticide residues are brought home by workers and handlers on their bodies and clothing (known as "take-home exposure"), creating an exposure pathway for family members.

This rulemaking is intended to reduce avoidable incidents by improving information, protections, and mitigations for workers and handlers without imposing unreasonable burdens on employers. Although EPA cannot quantify the specific reduction in incidents from any single change to the regulation, taken together, EPA estimates that the final rule will result in an annual reduction of between 540 and 1,620 acute, health-related incidents. In addition, EPA expects that the final rule will help reduce chronic health problems among workers and handlers by reducing daily pesticide exposures, and thereby improving quality of life throughout their lives, resulting in a lower cost of health care and a healthier society. (See Unit II.C.) Units V. through XIX. describe the final regulatory requirements and their potential to reduce avoidable incidents. The Economic Analysis for this rulemaking provides an estimate of the costs of the requirements and a quantitative and qualitative discussion of the potential benefits, including avoiding acute pesticide-related illnesses in workers and handlers (Ref. 1).

3. Demographics of workers and handlers. In addition to the complexity of the science issues involving pesticide use, variability of pesticide use patterns and incomplete information about occupational pesticide-related illnesses and injuries, the diversity of the labor population at risk and the tasks they perform makes it challenging to ensure that workers and handlers are adequately protected.

According to the most recent public data set available from the Department of Labor's (DOL) National Agricultural Worker Survey (NAWS) for 2011–2012, 64% of agricultural workers in the United States were born in Mexico and 6% in Central and South America (Ref. 6). A majority (69%) of all survey respondents speak Spanish as their primary language (Ref. 6). Approximately 65% of this population speaks a little or no English; 38% cannot read English at all and another 30% can only read English "a little" (Ref. 6). Many have received only some formal education; on average, the highest grade completed by foreign-born workers was seventh grade (Ref. 6).

Approximately 17% of the survey respondents were classified as migrant, having traveled at least 75 miles in the previous year to find a job in agriculture (Ref. 6). Only 17% of respondents lived in housing provided by their employer and 55% rented housing from someone other than their employer (Ref. 6). In general, agricultural workers surveyed by NAWS do not have access to employer-provided health insurance—in 2011–2012, only 21% of farmworkers reported having the option for employer-provided health insurance (Ref. 6). USDA research, based on NAWS data, also reports that workers have difficulty entering the health care system to receive treatment (Ref. 7). Cost was a significant barrier for two-thirds of farmworkers, while about a third listed language barriers as an impediment to receiving care. Most workers fear that seeking treatment will result in losing their job because someone will replace them while they are getting treatment or the employer will label them as troublemakers and dismiss them. The problem is more severe among undocumented workers because they fear seeking treatment will lead to deportation or other adverse legal action (Ref. 7). A USDA report indicates that the factors mentioned previously contribute to the disadvantaged status of hired workers in agriculture (Ref. 7).

The NAWS found that 19% of workers and handlers surveyed earned less than $10,000 annually from agricultural work, and another 39% earn between $10,000 and $20,000 annually. Over 55% of respondents reported a total family income below $22,500 (Ref. 6).

Both the existing WPS and the changes included in the final rule seek to eliminate some of the potential barriers to achieving effective protection of these persons by requiring training in a manner that workers and handlers can understand, requiring the employer to ensure that handlers understand relevant portions of the labeling before handling a pesticide, and expanding training to provide information on seeking medical care in the event of a pesticide exposure and highlighting the anti-retaliation provisions of the WPS.

4. Summary of the final rule. The final rule amends the WPS by:

- Requiring pesticide safety training at one-year intervals and amending the existing pesticide safety training content.
- Requiring recordkeeping for pesticide safety training.

• Eliminating the "grace period" that allowed workers to enter a treated area to perform WPS tasks before receiving full pesticide safety training.
• Establishing a minimum age of 18 for handlers and for workers who enter an area under an REI.
• Establishing requirements for specific training and notification for workers who enter an area under an REI.
• Restricting persons' entry into certain areas surrounding application equipment during an application.
• Clarifying requirements for supplies for routine washing and emergency decontamination.
• Requiring employers to post warning signs around treated areas when the product applied has an REI greater than 48 hours and allowing the employer to choose to post the treated area or give oral notification when the product applied has an REI of 48 hours or less (unless the labeling requires both types of notification).
• Requiring employers to maintain and make available copies of the SDSs for products used on the establishment.
• Requiring employers to provide application information and SDSs to designated representatives making the request on behalf of workers or handlers.
• Adding elements to the requirement to maintain application-specific information.
• Adopting by cross reference certain OSHA requirements for employers to provide training, fit testing and medical evaluations to handlers using products that require use of respirators.
• Requiring employers to provide supplies for emergency eye flush at all pesticide mixing and loading sites when handlers use products that require eye protection.
• Maintaining the immediate family exemption and ensuring it includes an exemption from the new minimum age requirements for handlers and early-entry workers.
• Expanding the definition of "immediate family" to allow more family-owned operations to qualify for the exemptions to the WPS requirements.
• Revising definitions to improve clarity and to refine terms.
• Restructuring the regulation to make it easier to read and understand.

Units V. through XVIII. discuss the final rule requirements and elements considered in the proposal but not included in the final rule. Unit XIX. discusses implementation of the final regulatory requirements. Each of these Units generally describes the existing rule, proposal and final regulatory requirements (where appropriate), and summarizes the major comments received and EPA's responses. A separate document summarizing the comments received that were relevant to the proposal and EPA's responses has also been prepared and is available in the docket for this rulemaking (Ref. 4).

EPA has grouped the discussion of the final rule and elements considered in the proposal but not included in the final rule as follows:
• Unit V: Pesticide Safety Training for Workers and Handlers.
• Unit VI: Notification.
• Unit VII: Hazard Communication.
• Unit VIII: Information Exchange Between Handler and Agricultural Employers.
• Unit IX: Drift-Related Requirements.
• Unit X: Establish Minimum Age for Handling Pesticides and Working in a Treated Area while an REI is in Effect.
• Unit XI: Restrictions on Worker Entry into Treated Areas.
• Unit XII: Display of Pesticide Safety Information.
• Unit XIII: Decontamination.
• Unit XIV: Emergency Assistance.
• Unit XV: Personal Protective Equipment.
• Unit XVI: Decision not to Require Monitoring of Handler Exposure to Cholinesterase-Inhibiting Pesticides.
• Unit XVII: Exemptions and Exceptions.
• Unit XVIII: General Revisions.
• Unit XIX: Implementation.

V. Pesticide Safety Training for Workers and Handlers

A. Shorten Retraining Interval for Workers and Handlers

1. Current rule and proposal. The existing WPS requires employers to ensure that workers and handlers are trained once every five years. EPA proposed to establish an annual retraining interval for workers and handlers in order to improve the ability of workers and handlers to protect themselves and their families from pesticide exposure.

2. Final rule. In the final rule, EPA has adopted the proposed requirement for workers and handlers to receive full pesticide safety training annually. The final regulatory text for these requirements is available at 40 CFR 170.401(a) and 170.501(a).

3. *Comments and responses.*

Comments. Several farmworker advocacy groups and public health organizations supported full, annual training, stating that the more frequent training would improve workers' and handlers' ability to protect themselves and their families, and that annual training would be simple to track administratively. Agricultural producer organizations, pesticide producers, and the Small Business Administration's Office of Advocacy recommended an initial in-depth training for new workers followed annually by a shortened "refresher" training. A similar suggestion was to require initial in-depth training for workers and handlers, followed by four years of refresher training, with an in-depth training every fifth year. Some states suggested training every two or three years, or allowing each state to set its own training interval, to parallel the state's pesticide applicator recertification interval. A few states recommended a system where the training timeframe is based on the calendar year, to allow flexibility for employers. For example, under this proposal, an employee trained in March 2014 could be retrained as late as December 2015. This suggestion would extend the permitted interval between worker and handler trainings to as long as two years. Comments from pesticide industry organizations suggested that the frequency of worker safety training be commensurate with an individual workers' tasks, previous training, and experience.

EPA Response. EPA considered the alternatives described for training frequency, and agrees with the comments that annual training, in some form, is the appropriate interval to ensure that workers and handlers receive more frequent reinforcement of the safety principles. EPA rejected the suggestion for a limited refresher training based on the difficulty both employers and regulators would face in tracking multiple levels of training among a mobile workforce, the burdens of maintaining multiple forms of training materials and providing different trainings where employees are on differing cycles for full and refresher training, and the fact that very little of the substantive content of the required training appears to be material that would not need to be brought to employees' attention annually.

The suggestions for biennial or triennial training and allowing the states to base the frequency of training for workers and handlers on their pesticide applicator recertification requirements would present similar administrative problems with tracking trainings and introduce the possibility that workers or handlers would miss information needed to protect themselves. Finally, the alternative to establish the frequency of training based on the calendar year presents similar issues with tracking training and needed frequency of repetition.

The recommendation for training to be tailored to the individual workers' tasks, experience, and prior training was rejected based on the difficulty in tracking the specific training needs with a mobile workforce, the need for multiple forms of training materials, and the potential burden on employers to determine specific needs for each employee. In addition, the training gives practical information that is useful to everyone who works with or around agricultural pesticides.

B. Establish Recordkeeping Requirements To Verify Training for Workers and Handlers

1. Current rule and proposal. The existing WPS does not specify how an employer must verify that a worker or handler has received pesticide safety training. EPA proposed to eliminate the existing voluntary training verification card system and to require employers to maintain records of WPS worker and handler training for two years. EPA proposed that the training record include, among other things, the employee's birthdate to verify minimum age for early-entry worker or handler activities. EPA proposed to require the employer to provide a copy of the record to each worker or handler upon completion of the training.

2. Final rule. EPA has finalized the proposed requirement for employers to maintain records of worker and handler training for two years. Required information for the record of worker and handler training includes the trained worker's or handler's name and signature, the date of training, the trainer's name, evidence of the trainer's qualification to train, the employer's name, and which EPA-approved training materials were used. EPA has not included in the final rule the proposed requirement for the employer to record or retain birthdate of the employee. The final rule does not require employers to automatically provide a copy of the training record to each worker and handler; instead, the final rule only requires the employer to provide a copy of the training record to the trained employee upon the employee's request. The final regulatory text for the worker and handler training recordkeeping requirements appears at 40 CFR 170.401(d) and 170.501(d), respectively.

3. *Comments and responses.*

Comments—compliance monitoring. Comments in support of a requirement for recordkeeping stated that it would ensure employees received the training and that it would improve enforcement and compliance.

EPA Response. EPA agrees with these commenters that recordkeeping is necessary for the purpose of compliance monitoring.

Comments—burden. Commenters stated that the proposed requirement to distribute the record to every trained worker or handler would be burdensome and that most workers or handlers would not take or keep the records.

EPA Response. EPA agrees with these commenters and has modified the requirement. The final rule requires employers to provide training records to the trained employee only on the employee's request. This will reduce the burden on employers while ensuring that interested employees will be able to demonstrate to future employers that they were appropriately trained.

Comments—birthdate. There were a number of comments, particularly from states, related to the proposed requirement that employers include the trained employee's birthdate among the information to be recorded to document training. EPA proposed including the trained employee's birthdate in the recordkeeping in order to facilitate its use to verify that workers or handlers met the proposed minimum age requirement for handling pesticides or entering treated areas while under an REI as allowed under the early entry exceptions. States noted that a person's birthdate can be considered confidential and personal information, the distribution of which can lead to identity theft.

EPA Response. EPA has decided the advantages of requiring the employer to record the birthdate of the trained worker or handler are outweighed in this instance by the concerns for protecting confidential and personal information. Under the final rule, the employer is responsible for determining that each employee has met the minimum age requirement. The final rule does not include the proposed requirement for the employer to collect or retain specific documentation of the employee's birthdate or age.

C. Establish Trainer Qualifications for Workers and Handlers

1. Current rule and proposal. The existing WPS allows workers and handlers to be trained by a variety of persons, including pesticide applicators certified to use restricted use pesticides (RUPs) under 40 CFR part 171, persons identified by the agency with jurisdiction for pesticide enforcement as a trainer of certified applicators, or persons having completed an approved pesticide safety train-the-trainer course. In addition, persons trained as handlers under the WPS are also eligible to train workers.

EPA proposed to limit eligible trainers of workers to those who complete an EPA-approved train-the-trainer program or are designated by EPA or an appropriate state or tribal agency as trainers of certified applicators; being a certified applicator or trained as a handler under the WPS would not automatically qualify a person to train workers under the proposal. EPA did not propose to change the qualifications for trainers of handlers.

2. Final rule. In the final rule, EPA has expanded the class of persons qualified to train workers relative to the proposed rule. Under the final rule, qualified trainers of workers include persons who: Have completed a pesticide safety train-the-trainer program approved by EPA, are designated as a trainer of certified applicators, handlers or workers by EPA or a state or tribal agency responsible for pesticide enforcement, or are certified pesticide applicators under 40 CFR part 171. Unlike the proposal, certified applicators are considered qualified to train workers under the final rule. However, consistent with the proposal, the persons trained as handlers under the WPS are not considered qualified to train workers under the final rule.

The final rule does not make any changes from the existing rule and proposal related to who is qualified to provide training to handlers.

The final regulatory text for worker and handler trainer qualifications is available at 40 CFR 170.401(c)(4) and 170.501(c)(4), respectively.

3. *Comments and responses.*

Comments. Many of the comments advised EPA to retain certified applicators as trainers of workers in the final rule. Several commenters stated that without certified applicators providing worker training, resources such as cooperative extension trainers would be severely strained and there might not be adequate resources to provide annual training for workers. Several states and others noted that certified applicators possess the necessary competence to provide training to workers; in some states, they must receive training specifically for the purpose of training workers in order to meet their certification requirements. Commenters also questioned how a certified applicator could be considered qualified to train handlers, but not workers, as many handlers have the same demographic profile as workers.

There were few comments in support of retaining handlers as trainers for workers. One comment suggested that handlers could be required to take an

approved train-the-trainer course to ensure they can adequately train workers.

EPA Response. EPA is persuaded by the comments that it is reasonable to expect that certified applicators can competently train workers, as well as handlers. Commenters note that certified applicators possess knowledge of pesticide safety from their certification training and pesticide handling experience. The commenters stated that the additional burden from the proposed requirement for annual training in combination with the elimination of certified applicators as trainers would severely strain trainer resources and potentially result in fewer workers receiving annual training. This concern persuaded EPA to include certified applicators as qualified to train workers in the final rule.

EPA agrees with the comment that handlers who have gone through a train-the-trainer course should be eligible to train workers. Under the final regulation, any person, including a handler, is qualified to train workers after successfully completing an approved train-the-trainer course.

D. Expand the Content of Worker and Handler Pesticide Safety Training

1. Current and proposed rule. The existing WPS requires employers to provide pesticide safety training covering specific content to workers and handlers. Under the existing rule, worker safety training content must include the following 11 points:

- Where and in what form pesticides may be encountered during work activities.
- Hazards of pesticides resulting from toxicity and exposure, including acute and chronic effects, delayed effects, and sensitization.
- Routes through 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, including emergency eye flushing techniques.
- Hazards from chemigation and drift.
- Hazards from pesticide residues on clothing.
- Warnings about taking pesticides or pesticide containers home.
- Requirements of the WPS designed to reduce the risks of illness or injury resulting from workers' occupational exposure to pesticides, including application and entry restrictions, the design of the warning sign, posting of warning signs, oral warnings, the availability of specific information about applications, and the protection against retaliatory acts.

Under the existing rule, pesticide handler safety training must include the following 13 basic safety training points:

- Format and meaning of information contained on pesticide labels and in labeling, including safety information such as precautionary statements about human health hazards.
- Hazards of pesticides resulting from toxicity and exposure, including acute and chronic effects, delayed effects, and sensitization.
- Routes through which pesticides can enter the body.
- Signs and symptoms of pesticide poisoning.
- Emergency first aid for pesticide injuries or poisonings.
- How to get emergency medical care.
- Routine and emergency decontamination procedures.
- Need for and appropriate use of PPE.
- Prevention, recognition, and first aid treatment of heat-related illness.
- Safety requirements for handling, transporting, storing, and disposing of pesticides.
- Environmental concerns.
- Warnings about taking pesticides or pesticide containers home.
- Training on the requirements of the regulation related to handling.

EPA proposed additional content in worker pesticide safety training including, among other things, information on the requirements for early-entry notification and emergency assistance, how to reduce pesticide take-home exposure, the availability of hazard communication materials for workers, the minimum age requirements for handling and early entry, and the obligations of agricultural employers to provide protections to workers.

EPA proposed additional content in handler pesticide safety training, including the requirement for handlers to cease application if they observe a person, other than another trained and properly equipped handler, in the area being treated or the entry-restricted area, and information about the requirement for OSHA-equivalent training on respirator use, fit-testing of respirators, and medical evaluation in the event a handler must wear a respirator.

2. Final rule. EPA has finalized the proposed additions to and expansions of the worker and handler pesticide safety training. The final regulatory text for the content of worker and handler pesticide training is available at 40 CFR 170.401(c)(2)–(3) and 170.501(c)(2)–(3).

The final rule requires employers to ensure that workers are trained on the following topics after EPA has announced the availability of training materials (see Unit XIX. for information on the timing of implementation):

- The responsibility of agricultural employers to provide workers and handlers with information and protections designed to reduce work-related pesticide exposures and illnesses. This includes ensuring workers and handlers have been trained on pesticide safety, providing pesticide safety and application information, decontamination supplies and emergency medical assistance, and notifying workers of restrictions during applications and on entering pesticide treated areas. A worker or handler may designate in writing a representative to request access to pesticide application and hazard information.
- How to recognize and understand the meaning of the warning sign used for notifying workers of restrictions on entering pesticide-treated areas on the establishment.
- How to follow directions and/or signs about keeping out of pesticide-treated areas subject to an REI and application exclusion zones.
- Where and in what form pesticides may be encountered during work activities and potential sources of pesticide exposure on the agricultural establishment. This includes exposure to pesticide residues that may be on or in plants, soil, tractors, application and chemigation equipment, or used PPE, and that may drift through the air from nearby applications or be in irrigation water.
- Potential hazards from toxicity and exposure that pesticides present to workers and their families, including acute and chronic effects, delayed effects, and sensitization.
- Routes through which pesticides can enter the body.
- Signs and symptoms of common types of pesticide poisoning.
- Emergency first aid for pesticide injuries or poisonings.
- Routine and emergency decontamination procedures, including emergency eye flushing techniques, and if pesticides are spilled or sprayed on the body, to use decontamination supplies to wash immediately or rinse off in the nearest clean water, including springs, streams, lakes, or other sources, if more readily available than decontamination supplies, and as soon as possible, wash or shower with soap and water, shampoo hair, and change into clean clothes.
- How and when to obtain emergency medical care.
- When working in pesticide-treated areas, wear work clothing that protects

the body from pesticide residues and wash hands before eating, drinking, using chewing gum or tobacco, or using the toilet.

• Wash or shower with soap and water, shampoo hair, and change into clean clothes as soon as possible after working in pesticide-treated areas.

• Potential hazards from pesticide residues on clothing.

• Wash work clothes before wearing them again and wash them separately from other clothes.

• Do not take pesticides or pesticide containers used at work to your home.

• Safety data sheets provide hazard, emergency medical treatment and other information about the pesticides used on the establishment they may come in contact with.

The responsibility of agricultural employers to do all of the following: Display safety data sheets for all pesticides used on the establishment, provide workers and handlers information about the location of the safety data sheets on the establishment, and provide workers and handlers unimpeded access to safety data sheets during normal work hours.

• The rule prohibits agricultural employers from allowing or directing any worker to mix, load or apply pesticides or assist in the application of pesticides unless the worker has been trained as a handler.

• The responsibility of agricultural employers to provide specific information to workers before directing them to perform early-entry activities. Workers must be 18 years old to perform early-entry activities.

• Potential hazards to children and pregnant women from pesticide exposure.

• Keep children and nonworking family members away from pesticide-treated areas.

• After working in pesticide-treated areas, remove work boots or shoes before entering your home, and remove work clothes and wash or shower before physical contact with children or family members.

• How to report suspected pesticide use violations to the state or tribal agency responsible for pesticide enforcement.

• The rule prohibits agricultural employers from intimidating, threatening, coercing, or discriminating against any worker or handler for complying with or attempting to comply with the requirements of this rule, or because the worker or handler has provided, caused to be provided, or is about to provide information to the employer or to the EPA or its agents regarding conduct that the employee reasonably believes violates this part, and/or has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing concerning compliance with this rule.

The final rule requires employers to ensure that handlers are trained on the following topics after EPA has announced the availability of training materials (see Unit XIX. for information on the timing of implementation):

• All content for worker training.

• Information on proper application and use of pesticides.

• Handlers must follow the portions of the labeling applicable to the safe use of the pesticide.

• Format and meaning of information contained on pesticide labels and in labeling applicable to the safe use of the pesticide.

• Need for and appropriate use and removal of all PPE.

• How to recognize, prevent, and provide first aid treatment for heat-related illness.

• 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.

• Handlers must not apply pesticides in a manner that results in contact with workers or other persons.

• The responsibility of handler employers to provide handlers with information and protections designed to reduce work-related pesticide exposures and illnesses. This includes providing, cleaning, maintaining, storing, and ensuring proper use of all required personal protective equipment; providing decontamination supplies; and providing specific information about pesticide use and labeling information.

• Handlers must suspend a pesticide application if workers or other persons are in the application exclusion zone.

• Handlers must be at least 18 years old.

• The responsibility of handler employers to ensure handlers have received respirator fit-testing, training and medical evaluation if they are required to wear a respirator by the product labeling.

• The responsibility of agricultural employers to post treated areas as required by this rule.

EPA intends to develop the training materials that meet the final training requirements and to publish in the **Federal Register** a notice of their availability. To allow time for the completion and distribution of revised training materials and to allow time for trainers to become familiar with them and begin training workers and handlers, the rule extends the implementation period for training on the new requirements for two years, or until six months after EPA has made the revised training materials available, whichever is longer.

The final requirements for the content of worker and handler pesticide safety training are available at 40 CFR 170.401(c)(2)–(3) and 170.501(c)(2)–(3), respectively.

3. Comments and responses.

Comments. Farmworker advocacy organizations, many states, and public health organizations provided support for the expanded training topics, in particular information about preventing take home exposure and medical evaluation, fit testing and training on respirator use for handlers who need to wear respirators. Some farmworker advocacy organizations commented on the importance of information about worker rights.

Agricultural producer organizations expressed concern for the additional burden of the lengthier training. Some states asserted that several of the handler training points are beyond the scope of the WPS and should be addressed in applicator certification only. Specifically, they requested that EPA eliminate training on environmental concerns from pesticide use; proper application and use of pesticides; and requirements for handlers to understand the format and meaning of all information contained on pesticide labels and labeling, and to follow all pesticide label directions. These commenters stated that these training points are appropriate for persons who work under the supervision of certified applicators, but they do not relate directly to worker or handler safety. Two states recommended a revision to language in the handler training topics requiring that "all" information on the pesticide label would be required to be covered, stating that all labeling information may not be relevant to a given application.

EPA Response. EPA does not agree with comments from states that the handler training topics related to environmental concerns from pesticide use, proper application and use, requirements for handlers to understand the format and meaning of information on labels and to follow label directions are beyond the scope of the WPS and may expand the liability of handlers. First, the "Worker Protection Standard" title is descriptive, and not jurisdictional. The WPS is, in essence, a codification of material that EPA would otherwise have to require to

appear on the labels of agricultural pesticides. Thus its potential scope is as broad as EPA's labeling authority. While there may be some point at which a prospective provision might be so tangentially related to the rest of the WPS that its inclusion in the WPS would cause excessive confusion that is not the case with the provisions included in this final rule.

In addition, this is not the first time that requirements included in the WPS have served purposes beyond the protection of agricultural workers and handlers. Section 170.210(a) of the existing rule requires that "The handler employer and the handler shall assure that no pesticide is applied so as to contact, either directly or through drift, any worker *or other person*, other than an appropriately trained and equipped handler" (emphasis added). Section 170.234(c) of the existing rule requires that, among other things, when application equipment is sent to non-handlers for repair, the handler employer must assure that pesticide residues have been removed, or else warn the person who would perform the repair. The handler training point on environmental concerns from pesticide use already appears in the existing rule at 40 CFR 170.230(c)(4)(xi). In response to a similar comment on the proposal that resulted in the existing regulation, EPA stated:

One comment questioned the relevancy of environmental information in worker protection training. The Agency believes such training is relevant to worker protection. Many environmental concerns are applicable not only to the organisms in the environment, but also to workers and other persons who may be in that environment. Ground and surface water warnings, for example, are designed not to protect only aquatic organisms, but to protect workers and other persons who may be using the water for drinking, cooking, bathing, etc. The Agency notes that FIFRA defines "environment" as including "water, air, land, and all plants and man and other animals living therein, and the interrelationships which exist among these (Ref. 8)."

The final rule retains the requirement for handler training on environmental concerns related to pesticide use from the current WPS.

EPA does not agree that the training topic requiring handlers to receive instruction on proper application and use of pesticides is only appropriate for noncertified applicators making application under the direct supervision of a certified applicator. First, handlers routinely apply pesticides, and misapplication of pesticides can result in injury to persons covered by the WPS, including workers and handlers. Training on proper use can help prevent such misapplication and consequent exposure to people. Second, relying solely on the training of noncertified applicators under direct supervision would cover only applicators using Restricted Use Products (RUPs), and many agricultural use products covered by the WPS are not RUPs. To ensure that handlers under the WPS have the training to apply pesticides properly, it is necessary for them to be trained on proper use. The final rule includes the handler training topic requiring information on proper application and use of pesticides.

EPA does not agree with the commenters that requirements for handlers to understand the format and meaning of information on labels and to follow labeling directions are only appropriate for noncertified applicators applying under the supervision of certified applicators. To properly handle agricultural pesticides covered by the WPS rule, handlers need to understand the information on the labeling related to safe use of the pesticide and follow the use instructions. Use of a product in a manner inconsistent with the labeling may cause injury or illness to the handler and to others. For a more detailed discussion of the comments and EPA's responses on issues related to labeling, see Unit XVIII.A.

E. Exception to Full Pesticide Safety Training for Workers Prior to Entry Into Treated Areas (Grace Period)

1. Current rule and proposal. Except in regard to workers entering treated areas during an REI, the existing WPS permits the agricultural employer to delay providing full pesticide safety training until the end of the fifth day after the worker's entry into a treated area, often called the "grace period," provided that the worker receives training in a basic set of two safety points before entering the treated area (*i.e.*, an area that has been treated or where an REI has been in effect within the last 30 days). Under this exception, the worker must receive the full safety training on the content outlined in the rule prior to the sixth day of entry into a treated area. EPA proposed to shorten the "grace period" to two days, require that full training take place before the third day of entry into a treated area, and expand the basic set of safety information to be provided prior to the worker's first entry into a treated area under the "grace period."

2. Final rule. EPA has eliminated the "grace period" entirely. The final rule requires employers to ensure that workers receive full pesticide safety training before entering a treated area (*i.e.*, an area that has been treated or where an REI has been in effect within the last 30 days).

3. Comments and responses.

Comments. Few commenters supported the proposed two day grace period coupled with the expanded basic safety points prior to first entry. Many agricultural producer organizations and the Small Business Administration's Office of Advocacy requested that EPA retain the five day grace period in the existing rule, stating it is needed for flexibility in scheduling training sessions as workers arrive at various times on the establishment. Several farmworker advocacy organizations and two states recommended elimination of the grace period entirely. One state recommended, as an alternative, adoption of the two day grace period with reduced material relative to the proposal required prior to first entry. Farmworker advocacy organizations that supported the elimination of the grace period cited the importance of workers having full safety information prior to entering an area with pesticide residues. One state that supported the elimination of the grace period expressed concern that this change would heighten concerns about the number of qualified trainers in the event that EPA would follow through on its proposal to make certified applicators ineligible to train workers.

EPA Response. While EPA recognizes the flexibility that the grace period offers agricultural employers in scheduling training sessions for workers, and the economic importance of that flexibility, EPA remains convinced that the elimination of the grace period is reasonable. The full pesticide safety training provides information that workers need to have before their exposure to pesticide treated areas so they can protect themselves. Under OSHA, training must take place at the time of the employee's initial assignment. EPA has decided that the cost of eliminating the grace period is reasonable when compared to the benefit from workers receiving the complete pesticide safety training before their first exposure to pesticides.

EPA acknowledges concerns raised by agricultural producer organizations and states that eliminating the "grace period" combined with the proposal to limit who is qualified to conduct worker training could result in an inadequate number of people available to provide worker training. The final rule continues to allow certified applicators to be trainers of workers (see Unit V.D.).

As a result, EPA expects that there will be an adequate number of trainers to provide full pesticide safety training for workers prior to their entry into treated areas.

F. Training Program Administration Requirements

1. Current rule and proposal. Under the existing WPS, pesticide safety training must be presented either orally from written materials or in audiovisual format. The information must be presented in a manner that the worker or handler can understand, and the trainer must respond to questions, but the existing rule does not require the trainer to be present for the entire training period. EPA proposed to retain the requirement to provide training in an oral and audiovisual format, to require that the trainer remain present throughout the training session, and to require that the training be presented in a place that is conducive to learning and reasonably free of distractions.

2. Final rule. EPA has finalized the proposed requirements for the presentation of training. Trainers of workers and handlers must remain present during training sessions to respond to questions. The training environment must be conducive to training and be reasonably free of distractions, to help ensure training quality. The final rule retains the existing requirement for pesticide safety training to be delivered either orally from written materials or by audiovisual means.

The final regulatory text for these requirements is available at 40 CFR 170.401(c)(1) and 170.501(c)(1).

3. Comments and responses.

Comments on use of videos. Some farmworker advocacy organizations endorsed the use of videos, stating that when used they enhance understanding of the material, especially when combined with hands-on activities or other kinds of learning approaches. Other farmworker advocacy organizations stated that there is a lack of interaction between the trainer and the employees trained using a video, resulting in reduced information transfer. Agricultural producer organizations and states also supported the use of the video, citing ease of use, and effectiveness. Many commenters from each category urged EPA to update the videos; a few suggested EPA evaluate different media presentations.

EPA Response. EPA agrees with the commenters who consider videos to be effective and useful training material. EPA recognizes that a video is a passive form of training, and has added the requirement for the trainer to be present to answer questions during the entire session to mitigate this problem. EPA also expects the requirement for the training to be in a location reasonably free of distractions to improve the ability of workers and handlers to absorb and retain information.

Comments on the requirement for trainers to remain present during entire training session. Farmworker advocate organizations and another commenter supported the proposal for trainers to remain present during the entire training, citing the need for them to be interactive with workers to enhance the training and facilitate discussion. One commenter, experienced in providing pesticide safety training, noted that the interaction with trainees, through hands-on training and sharing of experiences, was effective. Agricultural producer organizations opposed the requirement, stating that it would be distracting for the video to be interrupted for questions, and there would be lost time for the trainer. One commenter suggested it would lead to larger training conferences that would discourage post-video interaction. Some states opposed the requirement for the trainer to be present throughout the training; one state recommended that the trainer only needs to be available before and after the training if a video is used.

EPA Response. EPA agrees that having trainers present during the entire training program could facilitate discussion and promote interaction. EPA disagrees that the questions for the trainer would be disruptive to the training. A 2006 study (Burke) cited interactive training activities as a best practice for supporting training transfer. EPA is convinced that the trainer's presence during the video enhances the training by enabling questions and discussion during the presentation (Ref. 9).

Comments on the requirement for the training environment to relatively free of distractions and conducive to learning. The commenters were mostly in agreement that the learning environment needs to have minimal distractions and be conducive to learning. Farmworker advocacy organizations and public health organizations supported the proposed requirement as a way to improve the learning environment. Two farm bureaus suggested allowing the trainer to be absent during the video, and to have a supervisor present to ensure the quality of the training environment. One state supported the proposed requirement for the training to be conducted in an environment free of distractions. Finally, one agricultural organization described the environment where their workers receive training as taking place either on or outside their transportation bus or in the field, and noted that the low number of incidents is evidence that the training is effective.

EPA Response. EPA agrees that the requirement for the training environment to be reasonably free from distractions and conducive to training would make it easier for workers and handlers to learn. As discussed in the previous response, EPA disagrees with comments requesting that EPA eliminate the requirement for the trainer to be present throughout the training. The proposal and final rule establish requirements for the training location; the ultimate responsibility for ensuring the requirements are met rests with the employer. EPA recognizes that there are challenges in locating environments in agriculture that are quiet and present few distractions; classrooms are rarely convenient. However, EPA is requiring employers to provide a training environment that is reasonably free from distractions and conducive to training. EPA notes that the final rule does not prohibit providing training in any specific location, such as outdoors or on a bus, as long as the environment is reasonably free from distraction and conducive to training.

G. Require Employers To Provide Establishment-Specific Information to Workers and Handlers

1. Current rule and proposal. The existing WPS does not clearly require employers to provide to workers and handlers establishment-specific information on the location of decontamination supplies or hazard information as part of their pesticide safety training. EPA proposed that in addition to required pesticide safety training, employers must provide workers and handlers with establishment-specific information about the location of decontamination supplies and pesticide safety and hazard information, as well as how to obtain medical assistance. EPA proposed that agricultural and handler employers would be required to provide this establishment-specific information to all workers and handlers, including those previously trained on other establishments.

2. Final rule. EPA has finalized the proposed requirement for employers to provide establishment-specific information to workers and handlers. The final rule requires employers to provide establishment-specific information for workers and handlers when they enter the establishment and before beginning WPS tasks in areas

where within the last 30 days a product requiring compliance with the WPS has been applied or an REI has been in effect. Content for the establishment-specific information includes the location of the pesticide safety information, the location of pesticide application and hazard information, and the location of decontamination supplies. Employers are required to provide this information in a manner that the worker or handler can understand, such as through a translator, and prior to the worker or handler performing activities covered by the WPS. Lastly, this information is required even if the employer can verify that the worker or handler has already received the general pesticide safety training on another establishment, because the information required is specific to each establishment. The final regulatory text for these requirements is available at 40 CFR 170.403 and 170.503(b).

3. Comments and responses.

Comments. Commenters largely supported the addition of the establishment-specific training, with some noting that it is currently being provided voluntarily.

EPA Response. EPA agrees with the commenters that the establishment-specific training is necessary for workers and handlers to know where to find information on the establishment to protect themselves from pesticides and their potential effects. EPA notes that some of this information is required under the existing rule. However, EPA is convinced that consolidating the requirements for establishment-specific training will make them easier for employers to find and comply with, resulting in a higher likelihood that workers and handlers will receive the necessary information.

H. Costs and Benefits of Revisions to Pesticide Safety Training

1. Costs. EPA estimates the cost of changes to pesticide safety training for workers and handlers, including increased frequency, expanded content, recordkeeping, eliminating the "grace period," changing who is qualified to conduct training, and amending training program administration requirements would be $29.9 million annually and range from approximately $62 to $80 per agricultural establishment per year. For a complete discussion of the costs see the "Economic Analysis of Final Revisions to the Worker Protection Standard" (Ref. 1).

2. Benefits. While EPA can estimate the costs of the changes to pesticide safety training for workers and handlers, quantifying the benefits is more difficult. Nonetheless, as explained in the NPRM, it is reasonable to expect that more frequent training would lead to better retention of information by workers and handlers, ultimately resulting in fewer incidents of pesticide exposure and illness in workers and handlers, improved decontamination procedures, reduced take-home exposure, and better protection of children. Similarly, providing workers with training before they enter a treated area will give them tools they need to protect themselves before they encounter pesticides as part of their occupation. Improving the quality of worker training by limiting trainers to persons who have completed a train-the-trainer course, are certified applicators under Part 171, or have been designated by the regulatory agency responsible for pesticide enforcement as a trainer of workers, handlers or certified applicators is expected to advance worker comprehension of the safety principles and result in better self-protection. Finally, enhancing the quality of the training environment and ensuring that there is a knowledgeable person available throughout the training session to respond to questions will improve the ability of the trainee to retain the information.

The expansion of information provided in the training will enable workers and handlers to better protect themselves and their families, by increasing their knowledge of how to reduce take-home residues from treated areas. The training gives practical information that is useful to everyone who works with or around agricultural pesticides.

The requirement for recordkeeping is an important element of the training requirement. Although in itself not a protective factor, it will support the determination of compliance when partnered with worker and employer interviews and therefore promote adherence to the requirements. In the final rule the employer must provide the record to the worker or handler upon request. The burden of providing copies of training records will be offset by the reduction in the number of trainings that would otherwise have to be provided to workers and handlers who have already been trained at another establishment.

VI. Notification

A. Posted Notification Timing and Oral Notification

1. Current rule and proposal. The current WPS requires agricultural employers to notify workers about pesticide applications and areas on the agricultural establishment subject to an REI. Notification is required when workers are on the establishment during application or the REI and will pass within one-quarter mile of the treated area. On farms, and in forests and non-enclosed nurseries (referred to as "outdoor production" in the proposal) the agricultural employer may choose either to post warning signs at the usual points of entry around the treated area or to notify workers orally about applications that will take place on the establishment. In greenhouses and some other enclosed spaces (referred to as "enclosed space production" in the proposal), the agricultural employer must post warning signs for all applications, regardless of the product's REI. In cases where the product labeling requires both written and oral notification of workers, the WPS also requires this "double notification."

For outdoor production, EPA proposed requiring agricultural employers to post warning signs where the pesticide to be applied has an REI greater than 48 hours, and to allow the option of oral warning or posted notification for products with an REI of 48 hours or less. For enclosed space production, EPA proposed requiring posting of warning signs only when the product applied has an REI greater than four hours, and to allow the option of oral warning or posted notification for products with an REI of four hours or less.

2. Final rule. EPA has finalized the proposed requirements to post warning signs for all "outdoor production" when a product with an REI longer than 48 hours is used, and to allow either oral or posted warnings for "enclosed space production" when a product with an REI of 4 hours or less is used. The final regulatory text for these requirements is available at 40 CFR 170.409(a)(1)(ii)–(v). The final rule modifies the existing requirement for employers to take down posted warning signs within three days of the expiration of the REI by prohibiting worker entry into the area until the posted warning signs have been removed (except for early entry pursuant to 40 CFR 170.603). The final regulatory text for this prohibition is available at 40 CFR 170.409(b).

3. *Comments and Responses.*

Comments. Many states and some farmworker advocacy organizations and public health organizations supported the "field posting" and notification requirements as proposed. They noted the potential benefit to workers and employees of crop advisors of mandatory posting for the most toxic pesticides. They agreed with EPA's assessment that additional posting

would provide added protection for workers while placing a minimal burden on employers.

Several grower associations and farm bureaus supported the proposed change in notification requirements for indoor production but opposed the proposal for additional posting for outdoor production. They noted that signs can be destroyed, removed, or relocated and that agricultural producers may not return to some fields more than once per week. One grower association specifically requested that EPA clarify how enforcement would address these challenges without inappropriately penalizing agricultural employers. This group stated that workers are fully capable of understanding oral notification and suggest focusing instead on reinforcing the existing oral notification. Several grower organizations also did not agree that EPA justified the cost of the proposal with the benefits.

Farmworker advocacy organizations suggested a number of alternatives, including requiring both posting signs and providing oral warnings for all pesticide applications, or at a minimum for those pesticides with an REI of 12 hours or more. Some farmworker advocacy organizations suggested mandatory posting of any treated area subject to an REI greater than 24 hours, and others requested that EPA require mandatory posting of any treated area subject to an REI. They reiterated EPA's rationale that oral notification of pesticide application information is difficult to recall over multiple days, that oral notification may not be clearly communicated due to multiple language barriers and that it is difficult to verify whether oral notification was in fact given.

EPA Response. EPA considered the comments submitted and agrees that increasing workers' awareness of treated areas will lead to an overall reduction in occupational pesticide-related illnesses at reasonable cost.

EPA disagrees with comments that suggest oral notification alone would provide sufficient notification to workers and agrees with comments that support increased posting requirements. As noted in the proposal for this rule, research has shown that oral instruction alone may not be an effective method of safety instruction. EPA is aware that compliance with the posting requirement for outdoor production could require some establishments to change their business practices or monitor posted fields more often.

EPA considered additional posting requirements presented by farmworker advocacy organizations and was not convinced that the increased cost to employers to post all treated areas, or to post areas treated with products with REIs of 12 hours or greater, or 24 hours or greater would result in significantly more increased protections than the requirement to post areas treated with products with an REI longer than 48 hours. EPA concluded that it is reasonable to expect workers to remember oral warnings regarding REIs for two work days, or about 48 hours total, and reasonable to require visual reminders for longer periods.

4. Costs and benefits. EPA estimates the annual cost of posting treated areas under an REI of more than 48 hours and allowing oral notification for indoor production applications of products with an REI of 4 hours or less to be $10.4 million annually, with the per establishment cost of $33, and finds this cost to be reasonable in comparison to the benefit to workers to avoid pesticide illness by remaining out of treated areas under an REI.

B. Revise Content of Warning Sign

1. Current rule and proposal. The existing WPS requires agricultural employers to post warning signs with the words "DANGER," "PELIGRO," "PESTICIDES" and "PESTICIDAS," at the top of the sign, and the words "KEEP OUT" and "NO ENTRE" at the bottom of the sign. A circle containing an upraised hand on the left and a stern face on the right must be near the center of the sign. EPA proposed replacing "KEEP OUT" and "NO ENTRE" with "Entry Restricted" and "Entrada Restringida," and changing the shape containing the face and hand to an octagon (similar to a stop sign).

2. Final rule. EPA has decided not to change the text or graphic of the existing warning sign. The final regulatory text for the warning sign content is available at 40 CFR 170.409(b)(2).

3. *Comments and responses.*

Comments. Two states and several grower organizations supported the proposed changes on the grounds that "Entry Restricted" would be less confusing to workers than "KEEP OUT," since entry is allowed under certain circumstances. Many more state, farmworker advocacy organizations, and public health organizations opposed changing the existing warning sign. Those commenters asserted that "KEEP OUT" sends a much clearer message than "Entry Restricted," particularly to people with lower levels of literacy. They noted that the term "Entrada Restringida" is not common in Spanish, which is the first language of the majority of farmworkers in the U.S., whereas "KEEP OUT" is simple and well understood even by people who do not speak or read English. Commenters pointed to standard readability test results confirming that "KEEP OUT" is easily understood by most six-year-olds, while "Entry Restricted" is placed at the grade 12–13 reading level and would be beyond the reading and comprehension level of the majority of farmworkers in the U.S.

A number of states commented that the existing sign is sufficient. They noted that although "Entry Restricted" is more accurate, it would be a costly change for growers that may lead to confusion and not be more protective than the language on the existing warning sign. States also commented that 20 years of training and experience with the current sign is what makes it effective for keeping workers out of fields under an REI. The states and farmworker advocacy organizations agreed that for the predominantly low-literacy population of farmworkers, a simpler message, along with training on the message, is more protective than the proposed wording for the warning sign.

EPA Response. EPA was persuaded that the proposed changes to the warning sign would be costly for employers and not increase protections for workers as much as expected. A significant factor in EPA's decision was the additional information presented in public comments regarding the potential lack of understanding of the term "Entrada Restringida." EPA was convinced that eliminating the existing language, "KEEP OUT," in favor of a technically more accurate sign would be less protective for the majority of workers. The goal of the warning sign is to keep workers out of areas that are treated with certain pesticides. Entry into these areas is prohibited while the REI is in effect with a few narrow exceptions. Workers that are directed to enter treated areas under an REI and/or areas where the warning sign is posted must have received pesticide safety training, be provided additional protections, and be informed that their entry is subject to the limitations established for early entry exceptions in the regulation. Because EPA expects that the majority of workers would never enter treated areas during an REI, because 20 years of training and experience have familiarized workers with the message and intent of the sign, and because EPA has added additional training and protection for workers entering treated areas while an REI is in effect, EPA agrees with commenters that the easily understood message of "KEEP OUT" is most appropriate.

4. Costs and benefits. Since the final rule does not change the requirement in

the existing rule, there are no costs associated with this decision.

C. Warning Sign Location Revisions

1. Current rule and proposal. Under the existing rule, when signs are required for applications in outdoor production, they "shall be visible from all usual points of worker entry to the treated area, including at least each access road, each border with any labor camp adjacent to the treated area, and each footpath and other walking route that enters the treated area." EPA proposed maintaining the existing posting requirement for outdoor production and clarifying the language to require posting be visible from "each border with any worker housing area within 100 feet of the treated area," rather than "labor camps adjacent to the treated area."

2. Final rule. EPA has finalized the proposed changes to the warning sign location requirements for outdoor production. The final regulatory text for this requirement is available at 40 CFR 170.409(b)(3)(ii).

3. *Comments and responses.*

Comments. Several states, grower organizations, and farmworker advocacy organizations supported the proposal and agreed that it would support EPA's goal of increasing clarity of the rule and enhance the ability of employers to understand their responsibilities under the regulation. Commenters in support of the change noted that "adjacent" is a vague term that may be interpreted differently by different people and that "labor camp" is too limited and does not technically include worker housing. They noted that clearer posting requirements could lead to better compliance and thus be a better system for keeping people living in close proximity to treated fields safe.

Some pesticide manufacturers opposed the proposal on the grounds that it is an overly prescriptive, costly, and unnecessary provision which would not provide additional protection above that already provided by the label and existing WPS.

A public health organization proposed adding pesticide application information and REIs to the posting requirement near worker housing areas. One state suggested revising the language by stating "Each border with any worker housing area provided by this establishment/employer within 100 feet of the treated area."

EPA Response. EPA was not persuaded by the comments that the requirement would be a significant additional burden on employers. The requirement only clarifies where employers need to post warning signs but does not increase posting requirements beyond what was intended in the existing regulation. EPA agrees with commenters who noted that increased clarity on posting requirements will lead to better compliance and increase awareness of treated fields by workers who live near treated areas.

4. Costs and benefits. Because this change only clarifies an existing requirement, the cost, if any, would be negligible.

VII. Hazard Communication

A. Hazard Information—Location and Accessibility

1. Current rule and proposal. The existing WPS requires employers to display certain information about pesticide applications at a central location on the establishment when workers or handlers are present and an application of a pesticide requiring compliance with the WPS has been made or an REI has been in effect within the past 30 days (referred to as the "central display" requirement).

EPA proposed to replace the existing requirement for the application information to be located at the central display with a requirement for employers to make the application information and additional hazard information accessible upon request by workers, handlers or their authorized representatives.

2. Final rule. EPA has decided not to finalize the proposal. The final rule generally retains the existing requirement related to the location of, and accessibility for workers and handlers to, the pesticide application information, makes some changes to the content of the required information, requires display of hazard information, and includes the accessibility requirements proposed for workers, handlers, and their designated representatives ("authorized representatives" in the proposal). The employer must display the information at a place on the establishment where workers or handlers are likely to pass by (the "central display"). The information must be displayed when workers or handlers are on the establishment and an application of a WPS-covered pesticide has been made or an REI has been in effect within the past 30 days. After this time, the information must be kept on the establishment for two years and made available to workers, handlers, or their designated representatives or any treating medical personnel. The final rule contains more specificity than the proposal, particularly in reference to the designated representative, where details are drawn from OSHA's rule at 29 CFR 1910 (Ref. 17).

The designated representative must provide written evidence of such designation, including the name of the worker or handler being represented, a description of the specific information being requested, including dates of employment of the employee, the dates for which the records are requested, the type of work conducted by the worker or handler during that period, a statement indicating that the representative is designated by the worker or handler, the specific application and/or hazard information requested, a statement designating the representative to request the information on the worker's or handler's behalf, the date of the designation, and the printed name and contact information for the designated representative. If the information is to be sent to the requester, direction for where that information must be sent is to be included. When the employer is presented a request that contains all of the necessary information specified in the regulations, the employer must provide a copy of, or access to, all of the requested information that is applicable within 15 working days from the receipt of the request. Failure to respond to the request would be a violation of the rule. The final regulatory text for this requirement is available at 40 CFR 170.311(b)(9).

Workers and handlers who worked on the establishment may request, orally or in writing, the pesticide-specific information retained by the employer. The information must have been displayed while the worker or handler worked on the establishment. The employer must provide access to, or a copy of, the information within 15 days of the request. The regulatory text for this requirement is available at 40 CFR 170.311(b)(7).

Under the requirements to provide records to workers, handlers, and designated representatives, EPA also added language similar to that found in OSHA regulations (see 29 CFR 1910.1020(e)(1)(v)) to ensure that whenever a record has been previously provided without cost to a worker, handler, or their designated representative, the agricultural employer may charge reasonable, non-discriminatory administrative costs (*i.e.*, search and copying expenses but not including overhead expenses) for a request by the worker or handler for additional copies of the same record.

Medical personnel or persons acting under their supervision may also request the pesticide-specific

information required to be retained in 170.311(b)(6) to inform diagnosis or treatment of workers or handlers who were employed on the establishment during the time the information was required to be displayed. The request may be provided orally or in writing to the agricultural employer, and the employer must respond promptly to the request. The regulatory text for this requirement is available at 40 CFR 170.311(b)(8).

Lastly, the final rule makes some changes to the content of the required pesticide application information and when it must be posted, as explained in Units VII.C. and VII.D. The final regulatory text for this requirement is available at 40 CFR 170.311(b).

3. Comments and responses.

Comments. The overwhelming majority of commenters requested EPA to keep the existing central display requirement. Many comments from farmworker advocacy organizations, public health organizations, states, and some members of Congress noted that they thought it was unreasonable and unrealistic to think a vulnerable population such as workers and handlers would request hazard information from their employers. These commenters cited many reasons for this position, including barriers (*e.g.,* language differences, concern about compromising their immigration status, and fear of retribution, retaliation or job loss) and the power and social dynamics between employer and employee. These commenters were adamant that workers and handlers needed ready, anonymous, unhampered access to hazard information as currently provided through the central display requirement.

Most of these commenters supported the inclusion of a designated representative who could request the hazard information on behalf of a worker or handler, including farmworker advocacy organizations citing OSHA's requirements at 29 CFR 1910.1020(e)(1) that establish access to exposure records for workers in other industries. Comments in support of including access to hazard information by workers' or handlers' designated representatives note that workers and handlers may be reluctant to request the information for themselves due to their inability to communicate effectively with, or fear of, their employer, or because they may not be able to understand the information without help. One comment described a situation where a farmworker advocacy organization requested such information from an employer on behalf of two ill workers, but their request was denied because the workers themselves did not make the request.

In contrast, there was significant opposition from the agricultural industry to the proposal for the authorized representative, including growers, pesticide manufacturers, and their organizations, some states, and the Small Business Administration's Office of Advocacy. Comments from these groups centered on the additional burden on employers to provide the records. Commenters also expressed concerns that allowing access to pesticide application information by designated representatives could be abused by anti-pesticide organizations, who could send people onto the establishment requesting information purportedly on behalf of a worker or handler. In addition, some farm bureau comments stated that the requirement for providing the information to a representative is a violation of farmer's legal and privacy rights, stating that the representative could demand all information related to pesticides on that establishment.

Some commenters provided recommendations to improve the proposed requirement for a designated representative. Suggested improvements included limiting the designated representative requirement to current workers and handlers or to employees who worked on the establishment within two years of the request, limiting access to medical personnel only, or limiting the request to a specific incident. Many commenters recommended that the request be in written form, and include designation of the representative by the worker or handler. One state recommended defining a time frame for provision of the information to the requester. Another state suggested that the request clearly identify the information required to be provided to the authorized representative, and the purpose of the request or intended use of the information.

Many of the commenters in favor of keeping the existing central display requirement explained that a central display requirement that provides information about general pesticide safety, including symptoms of pesticide illness, and the specific pesticides used on the establishment, is necessary to protect the health of workers and handlers. First, having information available in non-emergency situations could help workers and handlers be aware of symptoms before they occur, help them avoid exposure, and possibly enhance the reporting of illnesses. Secondly, they stated that emergency medical personnel would not have to lose critical time tracking down information instead of treating the ill or injured person if they could rely on accessing the information quickly from the central display.

EPA also received comments from one pesticide manufacturer organization, a couple of states and some farm bureaus in favor of the proposal to eliminate the existing requirement for a central display of pesticide application information. These commenters agreed with EPA's observations in the preamble to the proposal that this requirement imposes a paperwork burden and that states often cite employers for technical violations of the display requirement. The commenters stated it is difficult to keep the displayed information current when application plans change, especially on large establishments. They also noted the difficulty keeping information legible when it is displayed at a central location subject to weather conditions. These commenters encouraged EPA to eliminate the existing central display requirement, not to finalize the proposed requirement to provide hazard communication information to workers, handlers, or their designated representative, and to require employers to only keep records of pesticide applications on their establishment.

EPA Response. EPA agrees with those commenters who argued that workers and handlers must have relatively unhindered access to pesticide-specific information, and has decided to retain the central display requirement. Although the extent and type of barriers and employer-employee dynamics are unique to each situation, EPA recognizes that a significant number of workers and handlers face disadvantages that can reasonably be expected to make them hesitant to ask their employers for information relating to their pesticide exposure. Consequently, EPA believes that it is not reasonable to make an employee's task of obtaining this information more difficult, particularly given the potential usefulness of the information if an employee may have been harmed by a pesticide. Therefore, EPA has decided to retain the requirement for the pesticide application information to be displayed at a place on the establishment where workers and handlers are likely to pass by or congregate and has added the requirement that the SDS must also be displayed at that location. In addition, in the final rule, workers and handlers and their designated representative may request either a copy of or access to the pesticide-specific information that was required to be displayed while the worker or handler was employed on the

establishment. The records of application and SDSs must be retained for two years after the application. Access to the SDSs after the display period will afford workers and handlers information about the pesticides they may have been exposed to, and the hazards they may present.

EPA recognizes, however, that there can be difficulties in complying with the central display requirement. In response to comments about the difficulty of keeping accurate information posted, EPA has attempted to simplify the central display requirement by changing the required time frame for posting the application-specific information (see Unit VII.D.). EPA expects this modification to the requirement for the timing to post the application information will reduce the burden on employers, while providing employees with ready access to accurate information. In response to the comments about the difficulty of maintaining a legible central display when it is subject to weather conditions, EPA notes that the central display requirement does not mandate that employers post the information outdoors. The information must be displayed "where workers and handlers are likely to pass by and congregate and where it can be readily seen and read" and workers and handlers must be able to access the information at all times during work hours. This does not preclude the central display from being maintained in a location sheltered from weather conditions, such as a bathroom, break area, or changing area, as long as the requirements of this section are met.

EPA has been convinced by comments in support to retain the option for a designated representative to access hazard information (application information and SDS) on behalf of a worker or handler. EPA agrees that including in the rule a requirement, based on OSHA's rule at 29 CFR 1910.1020, for employers to provide the information to a representative who has been designated to act on the behalf of the worker or handler would give workers and handlers more access to information related to pesticides used in their workplace. Also, EPA is aware that California and Texas regulations include requirements for employee representatives' to be given access to hazard information for farmworkers, and comments from the Texas Department of Agriculture encouraged EPA to require the designation in writing and to limit access to records to the retention timeframe of two years. EPA is unaware of issues related to worker representatives in those states.

In response to the many comments opposing the establishment of the authorized or designated representative based on concerns for the potential for anti-chemical activists fraudulently acquiring records, the final rule includes a requirement for the representative to provide to the employer documentation (written authorization) signed by the worker or handler that clearly designates that person to act as his or her designated representative. The information that can be obtained is limited to the application and hazard information that is required by § 170.311(b) of the final rule that was required to be displayed while the worker or handler was on the establishment, and for the dates applicable to the worker's or handler's dates of employment on the establishment. The employer must provide the information regardless of the worker's or handler's employment status on that establishment at the time of the request.

EPA was convinced by comments about the need for the pesticide specific information by medical personnel treating workers or handlers who may have been exposed to pesticides on the establishment, and has added a requirement that employers promptly provide the information to the requesting medical personnel or persons they supervise. The information would help ensure that the medical considerations would include the possibility that a pesticide exposure was involved in the worker's or handler's illness.

B. Pesticide-Specific Hazard Communication Materials—General

1. Current rule and proposal. The existing WPS requires employers to provide workers and handlers with specific pesticide application information, but not pesticide-specific hazard information on the pesticides they may be exposed to in the workplace.

EPA proposed to require employers to provide workers and handlers with access to the SDSs and pesticide labeling for products that have been applied on the establishment and to which workers and handlers may be exposed, in addition to the pesticide application information already required to be made available.

2. Final rule. EPA has finalized the requirement for agricultural employers to display at a central location pesticide application information and SDSs for pesticide products used on the establishment (referred to as "pesticide application and hazard information" in the final rule). EPA has not finalized the proposal to require employers to provide access to pesticide labeling. The final regulatory text for this requirement is available at 40 CFR 170.311(b).

3. Comments and responses.

Comments on providing safety data sheets and pesticide labeling. EPA received many comments in favor of the proposed requirement. Although many farmworker advocacy organizations expressed support for a requirement that employers maintain both labeling and SDS and make them available to workers and handlers, few discussed the merits or drawbacks. Many farmworker advocacy organizations, public health organizations and academics, a grower organization and others supported a requirement to maintain and provide SDSs. Some of these commenters indicated that the information on a SDS would be helpful for the correct diagnosis and treatment of pesticide-related illnesses. Farmworker advocacy organizations explained that workers want more information on what pesticides are used and what they are exposed to, along with possible side effects. On the other hand, a few grower organizations, a farm bureau, a pesticide manufacturer organization and a couple of states were against a requirement to provide SDSs. These commenters argued that EPA had not made a case strong enough to justify why workers need SDSs. They also opposed display of SDSs on the grounds that while the pesticide product label poses legally enforceable requirements on users, SDSs do not.

Some farmworker advocacy organizations, public health organizations, a grower organization, a farm bureau and others thought it would not be much of a burden on agricultural employers to acquire the SDSs of pesticide products because they are easily available online or can be requested from the pesticide manufacturer or distributor. One farmworker advocacy organization gave the Washington State Employer Hazard Communication rule (EHC rule) as an example of a requirement for employers to make SDSs available to employees that is feasible. *http://www.lni.wa.gov/IPUB/413-012-000.pdf.* The Washington State EHC rule applies to employers with one or more employees who either handle or are potentially exposed to hazardous chemicals, including pesticides, in their workplace. It requires employers to make SDSs for each chemical that employees may encounter readily accessible and easily obtained without delay during each work shift, and to ensure that employees traveling between workplaces during a work shift can immediately obtain the

SDS in an emergency. In contrast, a couple of grower associations stated that it is overly burdensome for agricultural employers to get SDSs. One state thought it would be difficult for employers to locate the correct SDS for pesticide products. They also noted that small businesses and private applicators will have the most difficulty since they are not already accustomed to keeping SDSs.

EPA received some comments both for and against providing pesticide product labeling. Many farmworker advocacy groups supported a requirement for the employer to provide the labeling. These commenters maintained that workers and handlers want more information on chemicals to which they may be exposed. On the other hand, farm bureaus, growers and grower organizations and states opposed a requirement to provide the labeling. These commenters expressed concern that EPA is expanding its mandate by requiring agricultural employers to provide the product "labeling" when it should be limited only to the WPS portions of the "label." These commenters argued that an agricultural employer could easily violate this requirement by not having the most current or correct version of the labeling, such as a specimen or technical label.

EPA Response. After consideration of the comments, EPA remains convinced that access to SDSs offers significant health and safety benefits to workers and handlers. SDSs contain information that is not generally included in pesticide labeling regarding chronic, developmental, and reproductive toxicity that can be valuable to exposed and potentially exposed workers, and to medical personnel and others who provide treatment to an ill or injured person. Moreover, given the ubiquity of chemicals subject to the OSHA Hazard Communication Standard that mandates the development and distribution of SDSs, it is likely that many health care professionals are more familiar with SDSs than pesticide labeling. Requiring the SDS as part of the central display facilitates a quicker identification of the pesticide product used in case of an incident and may assist in diagnosis. The SDS contains information about symptoms expected in a person exposed to the chemical (immediate, delayed and chronic effects) as well as recommended treatment, whereas the label may not include detailed information on symptoms or treatment. EPA recognizes that state pesticide regulatory agencies do not review, approve, or take enforcement action based on the information in SDSs. However, comments from worker advocates indicate that workers and handlers want to have more information on health effects, which is available on SDSs and generally not available on the pesticide labeling. OSHA is requiring that all SDSs be in a standard format, making it easier to locate health information (Ref. 17). Accordingly, EPA concludes that a requirement to post SDSs is an effective way to communicate pesticide hazard information important to workers and handlers. EPA notes that under the final rule workers and handlers will learn during pesticide safety training about SDSs, the information they contain, and their availability at central display locations. This addition to the training will further reinforce workers' and handlers' awareness and potential use of SDSs.

EPA is persuaded that access to SDSs is not a significant obstacle to requiring agricultural employers to keep and display SDSs for pesticide products used on the establishment. Agricultural employers can obtain SDSs from the distributor of the pesticide, online, or upon request from the product manufacturer. For example, employers in industries other than agriculture—including retailers and wholesalers of agricultural chemicals—are required by the OSHA Hazard Communication Standard to make available SDSs to their employees.

Upon consideration of the comments, EPA has decided not to require agricultural employers include the pesticide product label or labeling as part of the central display requirement. EPA recognizes the burden on employers to provide both the SDS and label or labeling in addition to the pesticide application information. As noted previously, the SDS contains the health-related information requested in comments by worker advocates, and that would be most useful to persons providing treatment to those who may have been exposed to pesticides. EPA agrees that if necessary, the labeling for a product used for a specific application can be located using the application-specific information that employers are also required to post. See Unit XVIII.A. for a complete discussion of comments related to labels and labeling.

Comments on the extent of the requirement. EPA received comments both to narrow and to expand the scope of the proposal requiring employers to maintain SDSs and make them available to employees. Among the suggestions to narrow the scope of the proposal, one state suggested EPA keep a central repository of SDSs for agricultural employers to access and require employers to keep the SDS only while the associated pesticide product remains on the establishment. Farmworker advocacy organizations and public health organizations recommended expanding the proposed requirement to a full Hazard Communication Standard as required by the Washington State ECHC for all hazardous chemicals, which requires employers to develop a written Hazard Communication program, maintain availability and access to SDSs, provide information and training on hazards in the workplace, translate certain documents upon request, and keep and provide access to exposure records for at least 30 years.

Many farmworker advocacy organizations suggested that EPA require SDSs to be available in multiple languages and provided two examples of similar requirements. First, one farmworker advocacy organization cited the Migrant and Seasonal Agricultural Worker Protection Act (29 U.S.C. 1801, *et seq.*), administered by the DOL, which requires written information on the terms of employment to be provided in English, Spanish or other language common to workers. Second, one farmworker advocacy organization claimed that in Washington State, agricultural employers are required to provide translated documents if requested. Farmworker advocacy organizations asserted that it would be easy to translate SDSs because of the standard format required by OSHA's adoption of the Globally Harmonized System of Classification and Labeling of Chemicals. One pesticide manufacturer organization was opposed to translating the SDS because of the many indigenous languages present among workers.

EPA Response. After reviewing the comments, EPA has decided on an approach that will provide workers and handlers with more information about the potential health effects associated with the pesticides to which they may be exposed without overly burdening agricultural employers. Obtaining the SDSs for products used on the establishment should not be overly burdensome to employers; SDSs are available from pesticide dealers and the internet. An EPA-managed repository of the SDSs of all WPS pesticides would not significantly improve access and would be a significant burden for EPA because of the number of pesticides included. Stakeholders such as grower organizations are free to voluntarily develop SDS repositories with assistance from members. Voluntary programs of this sort would involve limited subsets of all WPS-scope pesticide products and could possibly

be accomplished within a short period in comparison to a national, full-scale repository program.

EPA has decided not to reduce the amount of time the SDS must be available. The cost of retaining the SDS, once obtained, is negligible. Employees and medical personnel could benefit from access to the health effects information in the SDS in case of symptoms that develop sometime after the application has been completed.

EPA disagrees with commenters' request to adopt a full hazard communication proposal as required by the Washington State ECHC for all hazardous chemicals. The full set of the WPS requirements in the final rule provide protections similar to those provided to workers in other industries under OSHA's Hazard Communication Standard program, while recognizing differences between agriculture and other industries. As discussed in the Agency's 1992 proposed rule on the Worker Protection Standard; Hazard Information (Ref. 18), in response to numerous concerns about potential overlap or conflict between EPA's July 1988 proposed WPS (Ref. 18) and OSHA's August 1988 proposed Hazard Communications Standard (Ref. 19), EPA committed to work with OSHA to minimize confusion and avoid duplication between the two agencies' requirements. Rather than require agricultural establishments that may not routinely use the same pesticides to develop and maintain a written Hazard Communication Standard plan listing all chemicals that will be used in the workplace, EPA's approach, in both the 1992 proposed rule on Hazard Information (Ref. 20) and this final rule, has been to identify specific requirements, tailored to fit the context of pesticide use in agricultural production that serve a purpose similar to the Hazard Communication Standard requirements in other industries. These requirements include pesticide safety training, display of basic pesticide safety information, notification or posting of treated areas, and access to information about pesticides used in the workplace at a central location. EPA notes that the WPS does not exempt employers with 10 or fewer employees, unlike OSHA's Hazard Communication Standard. EPA also notes that the cost of a developing and implementing a full hazard communication program specific to each establishment could be burdensome to small agricultural establishments.

Lastly, although EPA is not requiring that SDSs be translated at this time, EPA encourages and supports employers to display this information in such a way that workers and handlers can understand, including translation. EPA is open to conferring with stakeholders on the need for translation and identifying content to be translated, if necessary. EPA notes that some pesticide manufacturers already make pesticide product SDSs available in Spanish and EPA encourages employers to display Spanish SDSs where available and appropriate.

Comments on other forms of hazard communications materials. Many farmworker advocacy organizations suggested EPA develop and provide crop sheets, booklets, or other types of materials that describe the health effects of pesticides, either in lieu of or in addition to the SDS. These commenters identified a need for a pictorial booklet designed for low-literacy audiences on the health effects from exposure to pesticides, based on the information in SDSs. One state suggested that a small booklet with basic pesticide exposure symptoms by classes of chemicals or modes of action, described in layman's terms would be more helpful to workers than SDSs. One pesticide manufacturer organization opposed the development of crop sheets.

EPA Response. EPA agrees with the basic concept of providing workers and handlers with information on the health effects of pesticides for workers and handlers in a manner they can understand. Pesticide safety training and the pesticide information display provide workers and handlers with information on the symptoms that may be associated with exposure to different pesticides. If workers or handlers need information about the specific effects of a pesticide with which they have worked, they can consult the SDS. However, EPA does not agree with the commenters' request to require crop sheets or similar materials because, in EPA's judgment, the benefits of such a requirement would not justify the substantial costs associated with creating, updating, translating and distributing materials for every crop, growing region, and WPS-scope pesticide product. As noted in the proposal for this rule, crop sheets and other types of material have been developed in the past, with very limited success. For example, one state's crop sheet program proved to be expensive and labor intensive, and the crop sheets were left as litter in the fields, unused. SDSs already contain information about the potential health effects (acute, delayed, and chronic) associated with use of pesticide products and will be readily available in a uniform format, including provide hazard information in words and in pictograms.

Comments on inconsistencies in information between labels and SDSs. A pesticide manufacturer organization opposed any requirement by EPA to provide SDSs to worker and handlers upon request. This commenter expressed concern about the confusion that may be caused by inconsistencies between pesticide labels and SDSs. OSHA requires manufacturers to use GHS terms and chemical classification criteria on SDSs whereas EPA does not require their use on pesticide product labels. As a result, SDSs and pesticide product labels could have different hazard statements, pictograms and signal words.

EPA Response. EPA has not finalized the proposed requirement for the employer to make available pesticide product labeling upon request. Instead, the final rule requires the employer to display only pesticide application information and SDSs for pesticide products used on the establishment. The SDS provides succinct information about the known health hazards of the product that typically is not presented as part of the product label or labeling. Such information can be invaluable to medical professionals for the diagnosis and treatment of certain pesticide-related illnesses and injuries. Because EPA is not requiring the employer to display the labeling, EPA does not expect issues with a perception of conflict between labeling and SDSs. The persons who wear PPE and have access to the label are pesticide handlers who receive more thorough training than workers. If pesticide handlers encounter conflicting information on labeling and SDSs, such as the PPE identified, they should know they must follow the instructions on the pesticide labeling, as they are trained to do. For information on OSHA's adoption of the Globally Harmonized System of Classification and Labeling of Chemicals for SDSs and the pesticide product labeling, see EPA's Pesticide Registration (PR) Notice 2012–1, "Material Safety Data Sheets as Pesticide Labeling" (*http://www2.epa.gov/sites/production/files/2014-04/documents/pr2012-1.pdf*).

C. Pesticide Application Information—Content of Pesticide Application Information

1. Current rule and proposal. In the existing WPS, the agricultural employer must record and display the following information about each pesticide application: The location and description of the area to be treated, the product name, EPA registration number and active ingredient(s) of the pesticide product, time and date the pesticide is to be applied, and REI for the pesticide.

EPA proposed to require the agricultural employer to record and make available, in addition to the information required in the existing regulation: The specific crop or site treated, the start and end dates and times of the application, and the end date and duration of the REI.

2. Final rule. EPA has finalized the proposed requirements for the contents of pesticide application information, with one change. The final rule requires agricultural employers to record and display the following pesticide application information: Product name, EPA registration number, and active ingredient(s) of the pesticide product applied; the crop or site treated and the location and description of the treated area; the date(s) and times the application started and ended; and the duration of the REI. The final rule does not require the employer to record the end date of the REI. The final regulatory text for this requirement is available at 40 CFR 170.311(b)(1)(ii)–(v).

The agricultural employer must record and display the information about the crop or site treated and the location of the treated area. EPA encourages employers to display the information in such a way that workers and handlers can understand and distinguish each treated area from all other areas on the establishment; in some cases, a map or diagram may be appropriate.

EPA encourages and supports the provision and display of the application information so it is most useful to workers and handlers on the establishment. One such option is to separate the information about treated areas, so those areas where an REI is in effect are distinct from those where the REI has expired, allowing the viewer to more quickly identify areas where entry is restricted. Similarly, maps highlighting areas where an REI is in effect and those where the REI has expired could also present the information in a user friendly, pictorial manner. EPA also sees an opportunity for employers to provide information of this nature through texting and other electronic means to their employees, and encourages such communication, in addition to the requirement for maintaining this information as part of the central display.

3. Comments and responses.

Comments. Many farmworker advocacy organizations, a few pesticide regulatory agencies, a grower organization and others supported the proposed expansion of the content requirement for pesticide application information records. According to these commenters, it would be a small burden to require additional application information, such as crops treated, that could help workers proactively avoid exposure to pesticides. One state asked EPA to parallel the information required by USDA to avoid confusion, while another suggested that more information be required in addition to the information proposed to assist state pesticide regulatory personnel in determining compliance.

Several farm bureaus, one grower organization and several states opposed any changes. These commenters asserted that the content required by the existing regulation is already too burdensome. Several farm bureaus opposed EPA's proposed expansion of the content of records stating that EPA had not justified it with quantifiable benefits. A few states, two farmworker advocacy organizations and other commenters suggested various combinations of records limited to three or fewer pieces of information. One grower organization argued that only a record of the active ingredient is needed for medical treatment, while another questioned how a record of the REI benefits the health and safety of workers. Lastly, these commenters maintained that recordkeeping of general use pesticide applications is not required by law, the proposed requirement is duplicative of state and federal requirements, and commercial applicators already keep records.

EPA Response. EPA agrees with the comments that adding more information to application records is a small burden compared to the benefits of determining compliance and giving workers and handlers information to verify the location of treated areas. The crop or site treated, start and end times and date(s) of the application, and duration of the REI are important for protecting worker and handlers and useful for determining compliance. Agricultural employers, compliance officers, workers, handlers and others will be able to calculate the end date and time of the REI by having the end date and time of the application and the duration of the REI included in the pesticide application information. The combined information will also help workers and handlers identify the areas where an REI is in effect. EPA did not propose requiring more information because the proposed content of application records fits the needs of stakeholders to determine compliance and to give workers and handlers the ability to discern which area had been treated. An arbitrary limit of only three or fewer pieces of information may not achieve the same benefits.

The WPS requires agricultural employers to maintain records because those records provide information that is important for the protection of their employees. While a significant number of agricultural employers may also be certified as private pesticide applicators, their status as private applicators does not exempt them from the WPS recordkeeping required of agricultural employers. The WPS does not require private applicators to maintain records on account of their status as private applicators.

The risks of concern under the WPS include both RUPs and non-RUPs, while certification requirements at the federal level, including recordkeeping, only apply to those using RUPs. Neither the USDA application record requirements for private applicators of RUPs, nor state application record requirements for commercial applicators fully cover the information needed under the WPS for the protection of workers and handlers. The USDA required information does not include the active ingredients, duration of the REI or the start and end dates and times of applications, nor does it apply to applications of non-RUP pesticides. Commercial applicators would have to record the information required by the state pesticide regulatory agency, which must at a minimum include the kinds, amounts, uses, dates and places of RUP applications. 40 CFR 171.7(b)(1)(iii)(E). Also, state pesticide regulatory agencies may or may not require records of non-RUP applications. Therefore, it is unlikely that all states' commercial applicator RUP application records will match exactly the record requirements of the WPS. Because the records required to be maintained by USDA and the states do not include all of the information needed for protection of workers and handlers, it is appropriate to require such recordkeeping through the WPS.

D. Pesticide Application and Hazard Information—When Information Must Be Made Available

1. Current rule and proposal. In the existing rule, the agricultural employer must record and display the pesticide application information before the application takes place, if workers or handlers are present on the establishment before the application begins. Otherwise, the information must be recorded and displayed at the beginning of any worker's or handler's first work period. If the employer posts warning signs for a treated area, the pesticide application information must be displayed at the same time as, or earlier than, the warning signs. The

information must remain on display when workers are on the establishment and from the time of the application until 30 days after the REI expires or until 30 days after the application end date if the REI is 0 hours (or in the rare instance where a label might not have an REI).

EPA proposed to require the agricultural employer to provide the pesticide application information, the SDS and labeling upon request during normal work hours, no later than the end of the day.

2. Final rule. The final rule requires the agricultural employer to display the pesticide application information and the SDS (pesticide application and hazard information) at the central display no later than 24 hours after the application is complete. Also, the employer must display the pesticide application and hazard information for each treated area before any worker is permitted to enter the treated area, even if the applicable REI has expired. If workers will be in the area, they must be notified of the application before it starts, by posted signs or orally, and warned not to enter the area. The application information and SDS must remain posted for 30 days from the expiration date of the REI or from the application end date if the REI is 0 hours (or in the rare instance where a label might not have an REI). EPA did not finalize the proposed requirement for the agricultural employer to make available the pesticide application information and the SDS no later than the end of the day of the application. The final rule eliminates the existing requirement to display the application information before or at the same time a warning sign is posted at a treated area. The final regulatory text for this requirement is available at 40 CFR 170.311(b)(5) and 40 CFR 170.309(l).

3. Comments and responses.

Comments. Several farmworker advocacy organizations and one public health organization requested that EPA keep the existing requirement to make information available before the application so workers and handlers would be able to connect symptoms to an application if the exposure occurred during the application. While many farmworker advocacy groups supported the display of information before an application, some expressed concern about the accuracy of the pesticide application information displayed when information about the application changed from what was planned and the displayed information was not updated. One farm bureau and one pesticide manufacturer organization requested that EPA require employers to make the information available after the application.

EPA Response. EPA agrees with the commenters that it is important to provide workers and handlers with accurate information about pesticide applications. Displaying the information after the application is complete benefits workers and handlers because they can be confident the information is correct, and the employer no longer has to change the information when application plans change. Under the final rule, EPA expects all displays of pesticide application information will contain accurate information. The final rule retains the requirement for workers to receive oral notification, or to see posted warning signs, or both before an application begins, informing them to stay out of an area before an application begins.

E. Pesticide Application and Hazard Information—Retention of Records

1. Current rule and proposal. The existing WPS requires employers to maintain pesticide application information at the central display from the time of application until 30 days after the REI expires. There is no requirement for the employer to retain the pesticide application information in any form after that time.

EPA proposed to require employers to retain, for each application of a WPS-covered pesticide, the pesticide application information, labeling and SDS, for two years from the date of the end of the REI for each product applied.

2. Final rule. The final rule requires agricultural employers to retain the pesticide application information and the SDS for the product used (pesticide application and hazard information) for two years from the date of expiration of the REI applicable to the application conducted. EPA has not included the proposed requirement for the employer to retain the pesticide labeling in the final rule. The final regulatory text for this requirement is available at 40 CFR 170.311(b)(6).

3. Comments and responses.

Comments. EPA received comments supporting a two year recordkeeping requirement from several states and one grower organization. One state commented that it did not have a need for the information after one year, but that two years was not much more of a burden. Many farmworker advocacy and public health organizations requested EPA to require recordkeeping ranging from more than two years to as many as 30 years to help with the diagnosis of chronic health effects that could be related to pesticide exposure.

Commenters from some farm bureaus, grower associations, and Small Business Administration's Office of Advocacy opposed a two-year recordkeeping requirement, in part because they asserted that EPA could not show quantifiable benefits. These commenters argued it would be a paperwork exercise without health and safety benefits driven based on the needs of enforcement, and instead should be replaced with a minimal, non-intrusive requirement. One commenter suggested requiring employers to keep records only during the harvest season.

EPA Response. EPA has concluded that a two-year recordkeeping requirement would be helpful for health diagnoses and investigation purposes. EPA considered requiring the retention of records for five years and asked state pesticide regulatory agencies about their needs for access to pesticide application records. These enforcement agencies informed EPA that they rarely need to rely on records beyond the two-year timeframe.

EPA notes that this recordkeeping requirement does not necessarily impose a duplicative burden on agricultural employers to obtain pesticide application information and SDSs twice—once to satisfy the central display requirement and once to satisfy the recordkeeping requirement. Agricultural employers may satisfy this recordkeeping requirement by the removal of the pesticide application information and SDS from the central display 31 days from the expiration of the REI (or from the end of the pesticide application if there is no REI) and retaining those records for two years from the date of application. EPA recognizes that some employers may choose to maintain electronic copies of pesticide application records and the product SDS. The WPS does not specify that records must be kept on paper, so an employer can maintain records electronically as long as the employer satisfies all related requirements of the WPS, such as being able to quickly access and provide the required materials in the event of a pesticide emergency.

F. Costs and Benefits

1. Costs. EPA estimates the cost for these final hazard communication requirements, implemented together, to be $9.3 million annually, or $25 annually per establishment (Ref. 1). The cost of the hazard communication requirements differs from the proposed requirements because EPA is maintaining and revising the existing central display requirement, allowing the agricultural employer to display

information after the application negating the need to update information later, and requiring the agricultural employer to display and keep records of the pesticide application information and SDS but not the labeling.

2. Benefits. Although EPA cannot quantify benefits specific to any of these requirements, the qualitative benefits from workers' and handlers' ready access to accurate information about areas under an REI, pesticides in use, and potential health impacts from those pesticides convinced EPA to adopt these requirements Ref. 1). The final rule retains the central posting requirement, and allows the employer some flexibility in posting the information so accurate information is displayed.

VIII. Information Exchange Between Handler and Agricultural Employers

1. Current rule and proposal. The existing WPS requires handler and agricultural employers to exchange information about pesticide applications. When handlers are employed by an employer other than the agricultural employer, the existing WPS requires the agricultural employer to provide the handler employer with information about treated areas on the agricultural establishment the handler may be in (or may walk within one-quarter mile of), including specific location and description of any such areas and restrictions on entering those areas. The existing WPS requires handler employers to provide agricultural employers with the following information prior to making a pesticide application on the agricultural establishment:

- Location and description of the area to be treated.
- Time and date of application.
- Product name, active ingredient(s), and EPA registration number for the product.
- REI for pesticide(s) applied.
- Whether posted notification, oral notification, or both are required.
- Any other product-specific requirements on the product labeling concerning protection of workers or other persons during or after application.

The agricultural employer must display this information for workers and handlers employed by the establishment at the central location. The current WPS requires handler employers to inform agricultural employers before the application takes place when there will be changes to scheduled pesticide applications, such as changes to scheduled pesticide application times, locations, and subsequent REIs.

In addition to maintaining the current requirements, EPA proposed to require the agricultural employer to also provide to the handler employer information about the location of "entry-restricted areas" on the establishment. EPA also proposed to require the handler employer to communicate to the agricultural employer the start and end times of pesticide applications and the end date of the REI. EPA also proposed to relax existing WPS requirements by requiring handler employers to provide information about any changes to pesticide application plans to the agricultural employer within two hours of the end of the application rather than before the application. Changes to the estimated application end time of less than one hour would not require notification.

Finally, in the proposal, EPA unintentionally omitted the provision in the existing WPS that the agricultural employer need not provide information to the handler employer about treated areas if the handler will not be in or walk within one-quarter mile of those treated areas.

2. Final Rule. Information exchange from agricultural employer to handler employer. The final rule requires the agricultural employer to notify the handler employer of any treated areas where an REI is in effect and any restrictions on entering those areas. EPA has not included in the final rule a requirement for the agricultural employer to communicate to the handler employer information about the location of "entry-restricted areas" on the establishment because of the changes to the requirement concerning entry-restricted areas, as discussed in Unit IX.B. EPA has also revised the final rule to correct the unintentional omission of the existing rule's exception that the agricultural employer need not provide information to the commercial handler employer about treated areas if the handler will not be in, or walk within one-quarter mile of those areas. The final regulatory text for these requirements is available at 40 CFR 170.309(k).

Information exchange from handler employer to agricultural employer. EPA has finalized the proposal to expand and clarify the information the pesticide handler employer must provide to the agricultural employer with minor modifications. The final rule does not require the handler employer to convey the end date of the REI to the agricultural employer. The final regulatory text for these requirements is available at 40 CFR 170.313(i).

Timing of exchange of information from handler employer to agricultural employer. EPA has modified the final rule to specify those situations where the handler employer must notify the agricultural employer of changes to the application information before the application takes place. EPA has also modified the rule to specify the timing for notifying agricultural employers if the notification is not required before the application. The final regulatory text for these requirements is available at 40 CFR 170.313(j).

3. Comments and responses.

Comments. Many states and a few farmworker advocacy organizations expressed general support for the proposal to expand the information to be exchanged. These commenters agreed the additional information would help agricultural employers protect workers, reduce pesticide-related illnesses and exposure from drift during applications. Many farm bureaus, states, applicators and applicator associations and an agricultural organization generally disagreed with the proposed expansion. Some of these commenters argued that the proposed requirements are unrealistic and impractical given the dynamics and unpredictable factors involved in a farming operation, such as pest infestations and weather changes. In addition, they argued that the proposal would require multiple parties to exchange information, resulting in the potential for miscommunication. Some commenters also opposed the proposed expansion of information exchange because EPA did not provide documented justification. Crop consultants, an applicator association and a farm bureau indicated the proposal is unnecessary because close coordination of information already exists between applicators, handlers, crop consultants, and growers. Furthermore, they stated that not only are handlers already required to keep workers out of areas during applications, applications are often scheduled to take place when workers are absent. A few states, farm bureaus and a crop consultant opposed EPA's proposal to add to the information the agricultural employer is required to give the handler employer. One crop consultant indicated the information is already on purchase orders or sales agreements between growers and commercial handlers or their employers. One state requested that EPA omit the application start time because it is not used to calculate the REI.

EPA's proposal on the timing to provide notice of a change in application plans elicited many comments. EPA proposed that this

notice be provided within 2 hours of the end of the application, unless the only change was a difference of less than 1 hour between scheduled and actual application times. One state and several farmworker advocacy organizations endorsed the requirement because of the ease of providing the information in the timeframe by relying on existing electronic capabilities. One farmworker advocacy organization urged EPA to require that changes be communicated before the start of the application in order to enable employers to be able to keep workers out of the treated area.

To prevent confusion about scheduled and actual start and end times and to avoid miscommunication, one state suggested that EPA require the handler employer to inform the agricultural employer of changes at any time on the application day. Two aerial applicators explained that a two-hour window for notification of change sounds reasonable on paper, but not in practice. During long workdays of the busy season, applicators would have to make phone calls in the middle of the night and send text messages, usually from the airplane during or in between applications. Also, it can take more than one day to complete an application because of factors such as the weather, a change in wind direction, or verifying the presence of bystanders. These situations could require the handler to give several updates to multiple parties, resulting in a greater chance for errors and noncompliance.

One commenter requested that EPA require notification of a change within 24 hours from the end of the actual application, while another advised EPA to require notification if the actual application completion time is two or more hours later than the scheduled application time. Several farm bureaus, a pesticide applicator and a crop consultant organization advised EPA to require that changes in application plans be communicated: Before the scheduled date and times, if the application is going to be made earlier than expected, or before the end of the REI as scheduled, if the application is made later than expected. One aerial applicator stated that if an REI is greater than 24 hours, EPA should require an information update before the scheduled REI expires or within 24 hours of the scheduled application time. Another aerial applicator recommended the handler employer and handler give the agricultural employer a window of estimated start and completion date(s) and time(s). In this situation, the handler would not make the application outside of that window without the approval of the agricultural employer, who in turn must keep workers out of the area during that time, unless notified of a change in the application start and completion date(s) and time(s).

Many commenters noted the absence of the existing provision that the agricultural employer need not provide information to the commercial handler employer if the handler will not be in or walk within one-quarter mile of an area that may be treated with a pesticide or under an REI, and noted this could result in the need to provide excessive, unnecessary information.

EPA Response. The information exchange requirements ensure that agricultural employers and handler employers have the information they need to comply with the requirements for notifying workers and handlers of risks associated with pesticide applications and treated areas (*i.e.,* agricultural employers are required to notify workers of treated areas and display pesticide application and hazard information at the central location on the establishment for workers and handlers to see, and handler employers must inform their handler employees of treated areas on the agricultural establishment near where they work).

EPA has been convinced not to adopt the proposed change to expand the information required to be communicated by the agricultural employer to the handler employer to include information about the location of "entry-restricted areas" on the establishment. Requiring employers to exchange this information would not be practical given other changes in the rule related to the "entry-restricted areas" (replaced by "application exclusion zones" in the final rule) that make the tracking of such areas infeasible. EPA also agrees that it is not necessary for the handler employer to calculate the end time of the REI for each application and include it in the information conveyed to the agricultural employer. The requirement to provide this piece of information has been deleted from the final rule.

Most of the other information required to be exchanged by the final rule is already required to be exchanged by the existing rule, and therefore EPA does not agree that this requirement presents a substantially increased or unreasonable burden. Agricultural and handler employers are currently required to exchange information so agricultural employers may provide notification of application and treated areas under an REI to workers and handlers. Without this information transfer, accurate and timely notification would be difficult to achieve, exposing workers and handlers to potential exposure to pesticides. It is critical that the agricultural employer know the start times of applications in order to be able to notify workers and handlers (when they are on the establishment) so they may avoid treated areas. EPA recognizes that exchange of the expanded information may already occur on some establishments and expects those entities to experience less burden than in situations where such coordination has not already developed.

EPA recognizes that much of the information required may be available on sales agreements and purchase orders between commercial pesticide handlers and agricultural employers, which will reduce the burden for employers to gather it; however, without inclusion of the information exchange requirements in the WPS there is no assurance of timely exchange of all of the necessary information.

EPA considered the range of options suggested for the timing of the information exchange. Several of the recommendations for notification of application changes from the commercial pesticide handler employer to the agricultural employer can be accommodated under the final rule. For example, the applicator and agricultural employer can agree on a window of the estimated start and end times, with the understanding that the application would be made during that period, unless the two communicate and agree to a different timeframe. This would allow the agricultural employer to notify workers of the treatment, keep them from the area, and create and post the application information, satisfying the requirement.

EPA did not identify any suggestions from commenters, apart from those that would be covered by the final rule that would meet the needs for agricultural employers to provide employees notification of the application and inform them of treated areas under an REI, and to record and display the pesticide application information. Agricultural employers must have information about the start time of the application before it begins to ensure they have the ability to notify workers of the application before it commences. Agricultural employers must have the end time of the application to notify workers that although the application has ended, entry to the treated area remains prohibited because an REI is in effect. Without these details being provided prior to the application, agricultural employers are not able to fulfill their responsibilities to protect workers.

EPA notes that the method for notification of changes to application information should be agreed upon between the handler employer and the agricultural employer to ensure receipt, and can be accomplished through electronic media, telephone, or other means. The agricultural employer must receive the information in sufficient time to record and display the information for workers and handlers.

4. Costs and benefits. EPA has estimated the cost of the information exchange requirements to be negligible because the existing rule already requires handler employers and agricultural employers to collect and exchange information. The changes in the final rule are minor and offer flexibility for employers. The information the agricultural employer must give the handler employer has been clarified. EPA has made minor changes to the information the handler employer must give the agricultural employer. The timing to notify the agricultural employer of most changes to the information has remained the same as the existing regulation, *i.e.*, before the application begins. In the final rule, two changes provide the handler employer flexibility. If the product changes or the application is made later than originally scheduled, the handler employer must notify the agricultural employer within two hours of the end of the application. If the only change was a difference of less than one hour between the scheduled and actual application times, notification is not required.

EPA expects these changes will ensure that the agricultural employer provides workers and handlers with accurate application information, which was problematic under the existing rule, and maintains accurate application records. The information exchanged and the timing of notification of changes of actual applications from scheduled applications remains essentially unchanged. Although notification can be given after the fact if a different pesticide product is applied or the application is completed after it was scheduled, this change does not make the WPS any less protective of workers, handlers and others. The agricultural employer will still have the essential information needed to know when and where to keep workers, handlers and others out of areas to be treated during and after treatment, and the revised information will be available in time for proper medical treatment if needed. The cost of including additional details is reasonable compared to the improved ability of workers and handlers to identify areas where pesticides are being applied or have recently been applied.

IX. Drift-Related Requirements

The requirements discussed in this section are intended to decrease the number of incidents in which workers and other persons are exposed to pesticides through unintentional contact during application. Drift is the off-site movement through the air of pesticide droplets or particles originating from pesticides applied as liquids or dry materials. Workers errantly in the area being treated may be directly exposed to pesticides during application. In addition, bystanders (both workers and non-workers) located outside a treated area may be exposed when pesticide droplets or particles move outside the area being treated through the air during and/or immediately after the pesticide application. As used here, the term "drift" includes both of these modes of exposure, but does not include off-site movement of pesticide-imbedded soil-borne particles by wind or vapor drift through volatilization of applied pesticide, although these are often categorized as "drift" in other contexts. EPA has developed methodologies for assessing the risks to bystanders from exposure to pesticides from drift and also from volatilization, and addresses risks of concern and other issues via the registration review process. The purpose of the requirements discussed in this section is to prevent workers and other persons from being exposed to pesticides by unintentional contact during application. The term "drift" is used as shorthand in this section to refer to unintentional exposure from both direct exposures to workers in the area being treated and drift exposures to workers and bystanders.

A. Overarching Performance Standard

1. Current rule and proposal. The existing WPS includes two related requirements that prohibit a pesticide from being applied in a way that contacts workers or other persons. Agricultural products subject to the WPS must have this statement on the label: "Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application." 40 CFR 156.206(a). Also, the existing WPS requires the handler employer and the handler to assure that no pesticide is applied so as to contact, either directly or through drift, any worker or other person, other than an appropriately trained and equipped handler. These requirements prohibit application in a way that contacts workers or other persons both on and off the agricultural establishment where the pesticide is being applied.

EPA did not propose any changes to the label statement. EPA proposed several minor wording changes to the WPS requirement for the handler employer and the handler, but the impact of the proposed requirement would be the same as under the existing WPS.

2. Final rule. EPA has finalized the proposed changes to the requirement for the handler employer and handler with a minor change. The final rule changes the language from the proposed "handler located on the establishment" to "handler involved in the application." As with the existing rule, the final rule prohibits contact to workers and other persons regardless of whether or not they are on the agricultural establishment. The final regulatory text for this requirement is available at 40 CFR 170.505(a). There are no changes to the label statement at 40 CFR 156.206(a).

3. Comments and responses.

Comments. Many commenters, including states and their organizations, grower associations, farm bureaus and pesticide manufacturer associations, stated that the existing two requirements adequately protect workers and bystanders from exposure during applications. These commenters opposed the other drift-related requirements that EPA proposed (entry-restricted areas for farms and forests and the requirement to suspend applications under certain conditions) as unnecessary, asserting the proposed requirements do not provide any additional protection.

Many respondents from states and their organizations, grower associations, farm bureaus and pesticide manufacturer associations commented that EPA's risk assessments and pesticide labels include conservative protections for applicators, handlers, workers and bystanders. Some of these commenters argued that the existing restrictions on the labels, including REIs and pesticide-specific buffers, provide sufficient protection to workers and bystanders.

Many respondents from all commenter types commented on incidents where workers or bystanders reported being contacted by pesticides that were being applied. Some of these incidents involve workers in the areas where pesticides were applied and other incidents involve workers or bystanders being exposed to pesticides that drifted off the target site. Many of the commenters cited three broad studies that looked at data from SENSOR-

Pesticides and California's Pesticide Illness Surveillance Program (Refs. 10, 11 and 12). Other commenters cited specific incidents of exposure from drift or workers in the area being treated being sprayed directly. Some applicator and pesticide manufacturer associations cited state data showing that there has been a decrease in drift complaints over time, dropping from an average of 333 complaints per year nationwide (from 1996 through 1998) to an average of 247 complaints per year (from 2002 through 2004).

EPA response. EPA disagrees with the assertion that the "do not contact" requirements, along with the other protections on pesticide labels, are by themselves sufficient to protect workers and bystanders from being directly contacted by pesticides that are applied. First, many commenters cited incidents where people were directly exposed to pesticide applications, even if there was disagreement about how regularly these types of incidents happen. Second, EPA's risk assessments and registration decisions are based on the premise that the WPS protections effectively prevent people (workers and bystanders) from being sprayed directly (Ref. 13). In other words, incidents where workers or bystanders are sprayed directly result in people being exposed to pesticides in a way that is not considered in EPA's risk assessments or registration decisions. These types of incidents are misuse violations but they continue to occur, as described in the following sections. Therefore, there is a need to supplement the existing WPS protections to reduce exposures to workers and other persons from being directly sprayed with pesticides.

There is no one solution that can prevent all drift incidents and it will take a comprehensive approach, including additional regulatory requirements, education, outreach, and some common-sense voluntary measures to further reduce the number of people who are directly exposed to pesticide spray/applications. The additional regulatory requirements include revised requirements for entry restrictions during pesticide applications and for handlers to suspend applications in certain circumstances. Common-sense voluntary measures include a grower talking to his/her neighbors to let them know when pesticides are being applied so the neighbors can keep workers and others away from the boundary of adjacent establishments during that time, and participating in voluntary communication programs such as Spray Safe (*http://www.spraysafe.org/*) and Drift Watch (*https://driftwatch.org/*). EPA intends to include information about good management practices as well as the regulatory requirements during outreach for implementation of the final rule. It is also worth noting that EPA is working to assess and mitigate any product-specific risks from exposure to pesticides from drift and from volatilization within the registration review process.

B. Entry Restrictions To Protect Workers and Other Persons During Application

1. Current rule and proposal. The existing WPS establishes entry-restricted areas adjacent to treated areas that apply *during* pesticide application for nurseries and greenhouses only. The existing rule requires that the agricultural employer must not allow or direct any person, other than an appropriately trained and equipped handler, to enter or remain in the entry-restricted area during a pesticide application in a nursery or greenhouse. The size of the entry-restricted area depends on the type of product applied and the application method. The entry restrictions for greenhouses also include ventilation requirements. The existing entry restriction requirement applies only within the boundaries of the agricultural establishment. The existing provisions at 40 CFR 170.110 regarding entering entry-restricted areas during application are different than the existing provisions at 40 CFR 170.112 regarding entry into treated areas *after* the application of a pesticide and before the REI specified on the pesticide labeling has expired.

EPA proposed to establish entry-restricted areas during pesticide applications on farms and in forests, while slightly modifying the requirement for entry-restricted areas for nurseries and greenhouses. EPA proposed two types of entry restrictions: One for enclosed space production, which would apply to greenhouses and other types of indoor production operations (*e.g.*, mushroom houses, hoop houses, polyhouses), and one for outdoor production, which would apply to farms, forests and nurseries. In addition, EPA proposed to define the entry-restricted area as the area from which workers or other persons must be excluded *during and after* the pesticide application.

2. Final rule. In regard to enclosed space production (*e.g.*, greenhouses, mushroom houses, hoop houses), EPA has finalized the requirements for entry restrictions during pesticide applications with several minor changes. For the most part, the final rule incorporates the existing entry restriction and ventilation requirements for greenhouses as the requirements for enclosed space production. The final rule deletes the term "entry-restricted area" and adjusts the descriptions of the application types to be consistent with the changes to the description of application exclusion zones for outdoor production. In addition, EPA changed the definition of "enclosed space production" to clarify that it applies only to areas with non-porous covering, so structures with a covering made of fencing or fabric to provide shade on plants (no walls) such as shade houses, are not considered enclosed spaces under the final rule. See the discussion of definitions in Unit XVIII.C. of this document for more information about the changes to this definition.

In regard to outdoor production (*e.g.*, farms, forests, nurseries, shade houses), the final rule differs substantially from EPA's proposed requirements. The final rule makes the following changes from the proposal:

- Replacing the phrase "entry-restricted area" with "application exclusion zone" to make it more distinct from the requirements regarding REIs. The final regulatory text for this requirement is available at 40 CFR 170.405(a).
- Revising the corresponding definition to clarify that the application exclusion zone exists only during (not after) a pesticide application. The final regulatory text for this definition is available at 40 CFR 170.305.
- Revising the corresponding definition and regulatory description of an application exclusion zone so it is a specified distance from the application equipment rather than from the edge of the treated area, and clarifying that the application exclusion zone moves with the application equipment. The final regulatory text for this requirement is available at 40 CFR 170.405(a)(1).
- Revising some of the application methods in the description of the application exclusion zone to reflect current application methods and to differentiate the distances based on the spray droplet size rather than pressure. The final regulatory text for this requirement is available at 40 CFR 170.405(a)(1).
- Adding a provision to the regulatory text to clarify that any labeling restrictions supersede the requirements of the WPS, including those related to application exclusion zones. This was discussed in the preamble of the proposed rule (Ref. 2 at 15490) but was inadvertently left out of the proposed regulatory text. The final regulatory text for this requirement is available at 40 CFR 170.303(c) and 170.317(a).

3. Comments and responses.

Comments—supporting the proposal or more stringent measures. Many commenters, including farmworker advocacy organizations, public health organizations, and a state, generally supported the proposed requirement for entry-restricted areas. The commenters stated that the proposed change should provide modest improvements in protecting workers from pesticide drift during application if there is enough training and education of applicators. One farmworker advocacy organization described an incident where workers were in a field topping tobacco at the same time a plant growth regulator with a 24-hour REI was being applied to the adjacent row. The workers were close enough to have to move out of the path of the tractor. However, because the treated area was defined to be only the rows being treated, this was permissible under the existing WPS. Many commenters provided other examples of incidents where workers were unintentionally exposed directly to the pesticide spray. A few farmworker advocacy organizations commented that many workers say that they have felt the spray of pesticides from fields close to where they work. A farmworker advocacy organization commented that in 2012, about 20% of farmworkers in New Mexico reported to the organization that pesticides were applied to the fields at the same time that they were working. Another farmworker advocacy organization stated that about half of the child tobacco workers interviewed by the organization in 2013 reported that they saw tractors spraying pesticides in the fields in or adjacent to the ones where they were working.

Many farmworker advocacy organizations and several public health organizations argued that EPA should revise the approach for entry restrictions to protect workers on neighboring property and to increase the length of the entry-restricted area. The recommended distances ranged from 60 to 200 feet for ground application and 300 feet to a mile or more for aerial application. EPA responded to some of these suggestions in its response to "Pesticides in the Air—Kids at Risk: Petition to Protect Children from Pesticide Drift (2009)" (Ref. 13).

Comments—opposing the proposal. Many states and their organizations, grower organizations, farm bureaus, applicator organizations, agricultural producer organizations, pesticide manufacturer organizations, and the Small Business Administration's Office of Advocacy opposed the proposed requirement to apply the entry-restricted areas to farms and forests. Most of these commenters argued that the approach is too complicated because it establishes another area to be controlled that varies by application type, may include persons other than those employed by the agricultural establishment and may be different than label restrictions. (Note: Some of the comments appear to reflect a misunderstanding of the proposal, *i.e.*, that the entry-restricted areas would be "buffer zones" that would remain in effect after the application was complete.) Some states and their organizations commented that the requirement to keep individuals out of varying widths of areas surrounding treated areas would be difficult for an agricultural employer to implement and even more difficult for a state to enforce.

Most of these commenters asserted that the proposed requirement to apply entry-restricted areas to farms and forests would present some logistical issues that could effectively shut down parts of the establishment. For example, many ground and aerial pesticide applications occur along rural roads or near access points to the agricultural establishment. These roads and access points would be within the proposed entry-restricted areas. On larger fields, pesticide applications could take several hours to complete. Commenters claimed that prohibiting workers from using these roads or gaining access to farm buildings for long periods of time would be impractical and could have an adverse economic impact. Many of the commenters stated that EPA did not account for the cost of stopping business during some pesticide applications. As an example, one grower organization opposed the "worker buffers" because they could take a lot of area out of cultivation on smaller farms, farms with widely varied crop maturities and farms that are not laid out in large blocks. Instead of arbitrary buffers, this commenter argued to keep the standard as it is—do not apply where workers are present and do not allow spray (or drift) to contact workers.

Comments on application types and distances. Some commenters addressed the specific application methods and the distances of 100 feet and 25 feet in the proposed entry-restricted areas. Some states, grower organizations, agricultural organizations and pesticide manufacturer organizations commented that the distances of 25 to 100 feet are not supported by drift reduction technologies, applicator standard operating procedures or incident data. A state commented that the table of application methods and distances is flawed because it does not account for all application scenarios and does not logically apply distances.

EPA Response. Based on the comments, EPA has made some changes in the final rule from the proposed requirement to extend entry-restricted areas to farms and forests. However, experiences such as those of workers having to move to get out of the way of the tractor that was applying pesticide (described previously) and workers being directly sprayed confirm EPA's position that additional protections are necessary during pesticide applications on farms and in forests. The existing WPS prohibits a farm or forest agricultural employer from allowing or directing any worker to enter or remain in a treated area, which is defined to include areas being treated. The existing regulations require oral notifications before pesticide applications to include the location and description of the treated area, the time during which entry is restricted and instructions not to enter the treated area until the REI has expired. The existing regulations require handler employers to ensure that pesticides are applied in a manner that will not contact a worker either directly or through drift. Inasmuch as these requirements—clearly intended to prevent direct exposure of workers during pesticide applications—have proven insufficient for that purpose, additional measures are needed.

EPA has changed the final rule in several ways to address some of the concerns expressed in the comments about the logistical problems with the proposal. First, in the final rule EPA replaced the term "entry-restricted area" with "application exclusion zone," which more clearly associates this restriction with the period during the pesticide application. This new term is also less likely to be confused with the term "restricted-entry interval." Second, EPA revised the requirements for the application exclusion zone so that it is not based on the "treated area," but instead a specified distance from the application equipment. The application exclusion zone is essentially a horizontal circle surrounding the application equipment that moves with the application equipment. For example, if a pesticide is applied aerially, the border of the application exclusion zone is a horizontal circle that extends 100 feet from the place on the ground directly below the aircraft, and moves with the aircraft as the application proceeds.

Because the application exclusion zone is based on the location of the application equipment, rather than the location of the treated area, the application exclusion zone could extend

beyond the boundary of the agricultural establishment. However, in 40 CFR 170.405(a)(2), the final rule limits the requirement for the agricultural employer to keep workers and other persons out of the treated area or the application exclusion zone during application to areas that are within the boundaries of the agricultural establishment, as proposed. The existing entry-restricted area requirement for nurseries is also limited to areas that are within the boundaries of the agricultural establishment. EPA retained the existing and proposed limitation because this requirement applies to the agricultural employer. The agricultural employer can control what happens on the agricultural establishment but could have difficulty limiting access to roads or fields that are beyond his property.

The comments reflected a general lack of understanding that the proposed entry-restricted areas would exist only during application, and many comments anticipated conflicts between no-spray buffers on some pesticide labels and the proposed entry-restricted area. However, these are two different types of requirements. If a label specifies a "no-spray" buffer, pesticide cannot be applied in that area at any time. Under the final rule, a pesticide can be applied in an application exclusion zone, and the requirement for agricultural employers is to keep workers and other people out of this zone during the pesticide application. These two types of requirements are distinct, and as a result should not be problematic to implement.

EPA reassessed the application methods and distances in the proposed requirements for entry-restricted areas for outdoor production and made some changes in the description of application exclusion zones in the final rule in § 170.405(a)(1). The final rule maintains the proposed distances of 100 feet and 25 feet but revises the application methods associated with each distance.

The application methods that have an application exclusion zone of 100 feet are the ones where pesticide is expected to move a longer distance from where they are applied. The changes include:

• Adding air blast applications, to more accurately and more broadly describe current application methods.

• Deleting pesticides applied as an aerosol because it is unnecessary.

• Including pesticides applied as a spray using a spray quality (droplet spectrum) of smaller than medium (volume median diameter less than 294 microns). The volume median diameter refers to the midpoint droplet size or mean, where half of the volume of spray is in droplets smaller, and half of the volume is in droplets larger than the mean. EPA chose to establish this criteria based on the spray quality rather than just the pressure because the drop size depends on a number of variables, including the pressure, the nozzle type, liquid properties, and the spray angle. Focusing on the spray quality, rather than pressure, is also consistent with EPA's voluntary Drift Reduction Technology program and current models of drift used in EPA's risk assessments.

The application methods that have an application exclusion zone of 25 feet are the ones where pesticide is expected to move a shorter distance from where they are applied. The changes include:

• Replacing several of the proposed criteria with pesticides applied as a spray using a spray quality (droplet spectrum) of medium or larger (volume median diameter of 294 microns or larger).

• Eliminating the criterion based on the product label requiring a respirator because it is intended to apply to enclosed spaces like greenhouses and was accidentally included in the proposed criteria for outdoor production.

The corresponding changes to application methods were made to the Table—Entry Restrictions During Enclosed Space Production Pesticide Applications at 40 CFR 170.405(b)(4) for consistency.

EPA acknowledges that some pesticide labels will have restrictions that apply during applications that are different than the application exclusion zones. For example, the restrictions on soil fumigant labels are more restrictive than the application exclusion zone of 100 feet specified in § 170.405(a)(1)(i)(D). In situations like this, pesticide users must follow the product-specific instructions on the labeling. As stated in §§ 170.303(c) and 170.317(a), when 40 CFR Part 170 is referenced on a pesticide label, pesticide users must comply with all of the requirements in 40 CFR Part 170, except those that are inconsistent with product-specific instructions on the pesticide product labeling.

C. Suspend Application

1. Current rule and proposal. As discussed in Unit IX.A., the existing WPS requires handler employers and handlers to assure that no pesticide is applied so as to contact, either directly or through drift, any worker or other person, other than an appropriately trained and equipped handler. However, the existing WPS does not include an explicit requirement for handlers to stop or suspend application. EPA proposed to add a provision to require a handler performing a pesticide application to immediately stop or suspend the pesticide application if any worker or other person, other than an appropriately trained and equipped handler, is in the treated area or the entry-restricted area. Based on the description of entry-restricted areas in the proposed rule, the requirement for handlers to stop or suspend application in certain circumstances would apply only *within* the boundaries of the agricultural establishment.

2. Final rule. In the final rule, EPA has made several changes to the proposed requirement to suspend applications. First, EPA revised the language to require a handler to "immediately suspend a pesticide application" rather than to "immediately *stop or* suspend a pesticide application" to clarify that the application must be suspended but can be restarted once workers or other persons are out of the zone. Second, EPA changed the area that is covered by the requirement to suspend application in two ways. EPA replaced "entry-restricted area" with "application exclusion zone," decreasing the size of the area that is covered by the requirement. See Unit IX.B. Also, EPA removed the treated area from the requirement. For outdoor production, the area covered by the requirement is much smaller than the area that would have been covered by the proposed rule, which would have been the treated area plus up to 100 feet beyond the edge of the treated area. Third, the application exclusion zone can extend beyond the boundaries of the agricultural establishment for the purposes of this requirement, *i.e.*, the handler must suspend application if any person other than another handler involved in the application is in the application exclusion zone, regardless of whether the application exclusion zone extends off of the employer's property.

The final rule requires the handler performing the application to suspend application if people who should not be present are in the application exclusion zone (which ranges up to 100 feet from the application equipment for outdoor production) or in the area identified for exclusion for enclosed space production (which ranges from 25 feet to the entire enclosed space plus any adjacent structure that cannot be sealed off.) The final regulatory text for this requirement is available at 40 CFR 170.505(b).

3. Comments and responses.

Comments. Some commenters, including farmworker advocacy organizations, public health organizations, academics, and a state

generally supported the proposed requirement for applicators to stop or suspend pesticide applications under certain conditions. A farmworker advocacy organization supported the proposed requirement, stating that current rules do not provide meaningful guidance on how applicators can prevent human exposure during applications. Some other commenters from farmworker advocacy organizations, public health organizations and public health agencies supported the proposed requirement but urged EPA to extend the protections to workers at neighboring establishments. Many of these commenters provided information suggesting that workers may be more likely to be affected by drift from a different establishment. For example, commenters cited a Washington Department of Health report that documented 43 workers in Washington being affected by drift from another farm while only 13 workers reported being affected by drift from the farm where they were working in 2010–2011. In comments arguing against the need for entry-restricted areas, some applicator organizations provided examples supporting the requirement to suspend applications, stating that it is standard operating procedure for aerial applicators to temporarily avoid making passes adjacent to roads or other areas if workers happen to be passing by in vehicles or on foot.

Many states and their organizations, grower organizations, farm bureaus, applicator organizations, agricultural producer organizations and pesticide manufacturer organizations opposed the proposed requirement for handlers to stop or suspend pesticide applications in certain circumstances. Most of these commenters argued that the provision is unnecessary because it would not offer any protections or prevent contact from pesticide applications beyond the existing "do not contact" requirement. Some commenters raised logistical concerns: Applicators may not be aware that a person has entered a treated area or entry-restricted area in many situations, such as in a forest or an orchard in full leaf, in a very large field, or if there are restricted sight lines or rolling hills; the proposed requirement would impose unwarranted expectations for pilots, who would have to be fully aware of boundaries 100 feet on all sides of the target area while traveling at 150 mph; as proposed, an applicator would have to stop if a person is in an entry-restricted area even if it is not possible for that person to encounter pesticides because of wind conditions.

A few grower organizations and farm bureaus commented that there is a difference between stopping and suspending an application and asked whether this would require applicators to cease application altogether or suspend the application until a person is no longer in the area.

EPA Response. As stated in the proposal, EPA has identified a need to supplement the "do not contact" performance standard because exposure to drift or direct spray events still happen despite the "do not contact" requirement, and EPA's risk assessments and registration decisions presume that no workers or other persons are being sprayed directly. Therefore, the final rule includes an explicit requirement for handlers to suspend pesticide applications under certain conditions, which mandates applicators to take specified actions to prevent exposing people to pesticide during applications.

However, EPA revised the final rule in response to several points made by commenters. First, the final rule requires a handler to "immediately suspend a pesticide application" rather than to "immediately *stop or* suspend a pesticide application." This change was made to clarify that the application must be suspended immediately if workers or persons other than handlers are in the specified areas but can be restarted once workers or other persons are out of the specified area.

EPA was persuaded by the commenters who raised logistical concerns about the proposed requirement, which were related to the handler not being able to see the person or a person entering an edge of a large area that is not near the application equipment. EPA revised the requirement in the final rule to decrease the size of the area that the handler must monitor for workers or persons other than handlers by removing the treated area from the area covered by this requirement and by changing the "application exclusion zone" so it is measured from the application equipment rather than from the edge of the treated area. In the final rule, the handler performing the application must suspend application if any of the identified people are in the application exclusion zone (which ranges up to 100 feet from the application equipment) rather than if any of the people are in the entire treated area plus that distance (up to 100 feet) from the edge of the treated area.

EPA was also persuaded by the comments and incident information about workers at neighboring establishments being directly contacted by drift. The incidents cited by commenters show that workers are directly exposed to pesticide applications from neighboring establishments as well as from the establishment where they are working. To reduce the number of incidents where workers are exposed to drift from neighboring establishments, the final rule extends the application exclusion zone beyond the boundaries of the agricultural establishment for this requirement, thus requiring applicators to immediately suspend applications if people other than a properly trained and equipped handler are in the application exclusion zone.

EPA has decided to extend the application exclusion zone beyond the boundaries of the agricultural establishment for the requirement to suspend applications for several reasons. First, this addresses more of the worker drift cases, where workers are within 100 feet of the agricultural establishment to protect more workers. Out of 17 incidents identified in the comments, only one would have been prevented if the application exclusion zone was limited to the boundaries of the agricultural establishment as provided in the proposed rule. The requirement in the final rule would have prevented at least four of the incidents reported in the comments, and possibly as many as 12, depending on the actual distances between the workers and application equipment, which were not specified in the comments. Second, the existing requirement that the handler must assure the pesticide is applied in a way that does not contact workers or other persons already extends beyond the boundary of the agricultural establishment. The new, explicit requirement to suspend application if people other than handlers are in the application exclusion zone is intended to supplement the existing "do not contact" requirement by giving the applicator specific criteria for suspending application. These specific criteria should be equally useful to applicators attempting to comply with the existing "do not contact" requirement beyond the boundaries of the agricultural establishment. Third, the application exclusion zone would extend a maximum of 100 feet beyond the boundary of an agricultural establishment only for the length of time it takes for the equipment applying the pesticide to pass by, so this should not shut down roads or access points to the establishment for long periods of time.

To reiterate a point made in Unit IX.B., the final rule does not hold agricultural employers responsible for keeping workers and other persons out of portions of the application exclusion zone that extend beyond the boundaries of the agricultural establishment. On the other hand, this provision in § 170.505(b) of the final rule imposes a requirement on the handler applying the pesticide to immediately suspend the application if workers or persons other than handlers involved in the application are in the application exclusion zone, whether on the establishment or beyond the boundaries of the establishment.

D. Costs and Benefits

1. Costs. In the proposal, EPA estimated the cost for restricting entry to areas adjacent to an area being treated would be negligible. EPA assumed that employers could generally reassign workers to other tasks for the duration of the pesticide application in instances where worker tasks in the adjacent areas had to be stopped until the application was complete. In the proposal, EPA estimated the cost of the requirement to suspend application would be negligible because it essentially clarifies an existing requirement. In the final rule, EPA estimates the costs of both requirements remains negligible.

2. Benefits. EPA believes both of the drift-related requirements discussed in this section of the preamble will help reduce the number of exposures of workers and other non-handlers to unintentional contact to pesticide applications. Therefore, the benefits of these requirements outweigh the negligible costs.

X. Establish Minimum Age for Handling Pesticides and Working in a Treated Area While an REI Is in Effect

A. Current Rule and Proposal

The existing regulation does not establish any age restriction for handlers or early-entry work. EPA proposed to prohibit persons younger than 16 years of age from handling pesticides, with an exception for handlers working on an establishment owned by an immediate family member. EPA requested comment on an alternative option of prohibiting any person under 18 years old from handling pesticides.

The existing WPS establishes conditions for when a worker may enter into a treated area under an REI. The conditions are related to the type of work performed (often referred to as "early-entry" tasks) and the length of time the worker may be in the treated area. However, the existing WPS establishes no minimum age for workers entering a treated area under an REI to perform early-entry tasks. EPA proposed to prohibit any worker under 16 years old from entering a treated area under an REI to perform early-entry tasks, with an exemption from this prohibition for persons covered by the immediate family exemption. EPA requested comment on an alternative option of prohibiting any person under 18 years old from entering treated areas during the REI to perform early-entry tasks.

B. Final Rule

The final rule prohibits persons younger than 18 years old from handling pesticides. EPA has retained the proposed exemption for handlers working on an establishment owned by an immediate family member. The final regulatory text for the prohibition is available at 40 CFR 170.309(c) and 170.313(c). The final regulatory text for the exemption is available at 40 CFR 170.601(a)(1)(i).

The final rule prohibits persons younger than 18 years old from entering treated areas during the REI to perform early-entry tasks, and retains the proposed exemption for persons working on an establishment owned by an immediate family member. The final regulatory text for this prohibition is available at 40 CFR 170.309(c) and 170.605(a). The final regulatory text for the exemption is available at 40 CFR 170.601(a)(1)(xii).

C. Comments and Responses

Comments. Many commenters requested that EPA establish a minimum age of 18 for handlers and early-entry workers. Commenters cited several reasons for their request. First, many commenters noted that adolescents' bodies are still developing and they may be more susceptible to the effects of pesticide exposure. Second, commenters noted that adolescents are less mature and their judgment is not as well developed as that of adults. This immaturity may mean that adolescents may be less consistently aware of risks associated with handling pesticides or entering a treated area while an REI is in effect, that they may not adequately protect themselves or other workers from known risks, and that spills, splashes, and improper handling practices may be more likely. A few commenters submitted studies related to development of maturity and decision-making skills in adolescents in support of this assertion. Third, commenters asserted that restricting handling activities to persons at least 18 years old could result in higher potential economic benefit from avoiding exposure and any potentially related chronic effects to children, because they have a longer potential life span. Fourth, because information on the potential chronic effects of pesticide exposure on developing systems is not known, commenters recommended that EPA prohibit adolescents from handling pesticides and entering treated areas while an REI is in effect as a precaution until it can be shown that they would not suffer adverse chronic effects from potential exposure. Finally, a few commenters noted that persons under 18 years old are protected in other industries by OSHA and should receive similar protections under the WPS, and that some states have already prohibited handling of pesticides in agriculture by anyone under 18 years old.

Some commenters expressed support for a minimum age of 16. States primarily supported EPA's proposal to establish a minimum age of 16, noting that establishing a minimum age of 18 would require them to change their state laws. Other commenters supporting the proposed minimum age of 16 noted that this requirement would align with DOL's restriction on handling pesticides in toxicity categories I and II in agriculture.

A few commenters opposed establishing any minimum age. These commenters asserted that EPA should not take any action because the DOL's hazardous occupations orders under the Fair Labor Standards Act (FLSA) already prohibit adolescents under 16 years old from handling pesticides in toxicity categories I and II in agriculture with limited exceptions. Some commenters also assert that establishing any minimum age for pesticide handlers is a matter that should be handled by the states, not EPA.

Some commenters requested that EPA eliminate the exception from any minimum age requirement for members of the owner's immediate family. Commenters assert that adolescents' developmental status does not differ if they are an employee on a farm owned by an immediate family member or by someone unrelated to them. Other commenters supported EPA's proposal or requested that EPA establish a higher minimum age only if EPA also retains the exception for members of the owner's immediate family.

EPA Response. Based on the comments received and an evaluation of existing literature related to adolescents' development of maturity and judgment, EPA has decided that the benefits of further reductions in adolescent pesticide exposures justify their cost; the final rule generally prohibits persons under 18 years old from

handling pesticides or entering a treated area while an REI is in effect. EPA recognizes that adolescents' bodies and judgment are still developing. While studies have not demonstrated a clear cut off point at which adolescents are fully developed, literature indicates that their development may continue until they reach their early to mid-20s. EPA also agrees that research has shown that adolescents may take more risks, be less aware of the potential consequences of their actions on themselves and others, and be less likely to protect themselves from known risks. All of this information supports establishing a higher minimum age than proposed in order to allow those handling pesticides to develop more fully before putting themselves, others, and the environment at risk, and to allow those performing early-entry activities to develop more fully in order to adequately protect themselves from the risks of entering a treated area while an REI is in effect. The final rule will reduce the potential for misuse by adolescent handlers who may less consistently exercise good judgment when handling agricultural pesticides.

EPA notes commenters' assertions that avoiding pesticide exposure in adolescents could result in higher potential economic benefit because of adolescents' longer potential lifespans. EPA agrees that it is appropriate to take reasonable precautions to protect adolescents from pesticide exposures, both because of the potential impact of pesticides on further development and because adolescents may not properly appreciate (and take appropriate steps to avoid) the risks of potential pesticide exposure. While statistical associations have been observed in studies that estimate the relation between pesticide exposure and chronic health outcomes such as cancer, the causal nature of these associations has not yet been determined; thus quantifying the magnitude of the chronic health risk reduction expected as a result of pesticide exposure reduction is not possible. However, based on what is known about the potential for biologically active chemicals generally to disrupt developmental processes, it is reasonable to have heightened concern for adolescents under the age of 18 in situations where they face particularly high pesticide exposures. Prohibiting adolescents under the age of 18 from handling agricultural pesticides will protect them from any potential risks of pesticide use through handling activities, ensuring that adolescents do not suffer unreasonable adverse effects from handling agricultural pesticides. Prohibiting adolescents under 18 years old from entering a treated area while an REI is in effect will protect them by delaying their entry into treated areas until residues are at a level that should not cause unreasonable adverse effects.

EPA recognizes that DOL prohibits persons under 18 years old from engaging in hazardous tasks in other industries, and that some states have taken action to prohibit certain adolescents from handling pesticides in agriculture (state minimum ages for pesticide handlers, where established, range from 16 years old to 18 years old). These examples of protections for adolescents in other industries or by states indicate a recognition that different standards for certain adolescents and adults are appropriate.

EPA disagrees with commenters' assertions that EPA should defer to the states or the FLSA and not establish any age-related restrictions on pesticide handling or early-entry activities. EPA has the responsibility under FIFRA to regulate the use of pesticides to avoid unreasonable adverse effects, apart from any requirements established by other federal or state laws. The DOL's actions under the FLSA limiting the use of certain pesticides to persons at least 16 years old do not preclude EPA from taking actions to ensure that human health and the environment are protected from unreasonable adverse effects. While DOL's hazardous occupations order prohibiting those under 16 years old from handling certain pesticides satisfies the purposes of the FLSA, those purposes are distinct from those of FIFRA. EPA has concluded that because, as discussed previously, adolescents' bodies, maturity, and judgment are still developing, the handling of agricultural pesticides and entry into a treated area while an REI is in effect by persons under 18 years old presents an unreasonable likelihood of adverse effects. Therefore, the final rule generally limits pesticide handling and early-entry activities to persons who are at least 18 years old.

EPA agrees that adolescents' developmental status does not differ if they are employees on a farm owned by an immediate family or by someone unrelated to them. However, EPA recognizes that imposing a minimum age for handling agricultural pesticides or performing early-entry tasks on owners or members of their immediate families could significantly disrupt some immediate family-owned farms. Given the high social cost of imposing a minimum age requirement on owners and members of their immediate families on farms owned by members of the same immediate family, EPA has finalized the proposed exemption to this requirement.

4. Costs and benefits. EPA estimates the cost of requiring handlers and early-entry workers to be at least 18 years old would be $3.1 million annually. EPA estimates that, on average, the cost would be about $8 per agricultural establishment per year. The cost per commercial pesticide handling establishment per year is estimated to be over $360. The estimated cost of the final requirement is likely to be overstated, particularly for commercial pesticide handling establishments, because EPA made some very conservative assumptions regarding the amount of time an adolescent works.

EPA cannot quantify the benefits associated with this specific proposal. However, this requirement would improve the health of adolescent handlers, as well as other workers and handlers on the establishment and the environment. It would also improve the health of adolescent workers by reducing their potential for exposure to pesticides in a treated area when an REI is in effect. As discussed in the preamble to the proposed rule, adolescents' judgment is not fully developed. Restricting adolescents' ability to handle pesticides will lead to less exposure potential for the handlers themselves, and less potential for misapplication that could cause negative impacts on other handlers or workers on the establishment, as well as the environment.

XI. Restrictions on Worker Entry Into Treated Areas

A. Requirements for Entry During an REI

1. Current rule and proposal. The existing WPS establishes specific exceptions to the general prohibition against sending workers into a treated area while an REI is in effect. Workers who enter pesticide-treated areas during an REI (known as "early-entry workers") without adequate protection may face an elevated risk from pesticide exposure. Under the existing rule, the employer must: Ensure that the worker has read or been informed of the human health hazards on the product labeling; provide instruction on how to put on, use, and remove PPE; stress the importance of washing after removing the PPE; and instruct the worker on how to prevent, recognize, and treat heat-related illness. The employer must also implement measures to prevent heat related illness when workers must wear PPE.

In addition to these existing requirements, EPA proposed to require

employers to inform workers sent into a treated area while the REI is in effect of the specific exception under which they would enter, to describe the tasks permitted and any limitations required under that exception, and to identify the PPE required by the labeling. EPA also proposed to require the employer to create a record of the oral notification provided to early-entry workers, to obtain the signature of each early-entry worker acknowledging the oral notification prior to the early entry, and to maintain the record for 2 years.

2. Final Rule. EPA has finalized the proposed requirements for the employer to inform the worker of the type of exception which permits the entry into the area under an REI, to describe the tasks that the worker may perform and other limitations under the exception, and to identify the PPE that must be worn. However, EPA has decided not to require employers to create or maintain records of the oral notification. The final regulatory text for this requirement is available at 40 CFR 170.605.

3. Comments and responses.

Comments on oral notification. Comments on the proposal to inform workers of the early entry exception and to explain the PPE were largely supportive, recognizing the reasonable nature of the proposed information. Commenters in support of the proposal included a pesticide manufacturer organization and farmworker advocacy organizations. One public health organization supported the proposal, but recommended that the requirement be modeled after OSHA's confined space regulations, to include: Specific training for early entry, a requirement for workers to be provided respirators and other necessary PPE, written emergency rescue procedures and resources in case of an overexposure or other mishap, on-site monitoring of the worker from outside the entry zone, and recordkeeping of each entry.

Several agricultural producer organizations and pesticide manufacturer organizations supported the proposal, but expressed concern for the requirement for employers to manage heat stress.

EPA Response. EPA has decided not to amend the final rule based on OSHA's confined space regulations. OSHA's definition of a confined space is one in which there is limited or restricted means for entry or exit. These characteristics exacerbate any hazard to the employee, in that the employee could be overcome by a toxic atmosphere or by physical engulfment, such as in a grain storage bin, and be unable to quickly exit. EPA recognizes a similar potential for pesticide handlers making fumigant applications in greenhouses to be overcome by the fumigant. The WPS provides protections for such scenarios by requiring PPE, including respirators where required by the label, and continuous monitoring by a handler outside of the treatment area. The handler entering the greenhouse would have specific instructions on the labeled hazards. The monitoring handler must have access to the PPE required by the product labeling in case they would need to enter the greenhouse for rescue of the applicator. However, except for the use of fumigants, which have specific label requirements because of their increased potential for inhalation risk, the more common scenario of a worker entering a treated area on a farm, forest, or in a nursery during the REI would not pose such risks from a toxic atmosphere. It is unlikely that there would be an environment that could concentrate the pesticide and produce a potentially life-threatening environment. The predominant component of exposure during work in a treated area where an REI is in effect is dermal, with rare exceptions. Specific information about the entry must include the human health hazards on the pesticide labeling, explanation of the required PPE and the proper way to wear and remove PPE, description of the tasks that may be performed and any limitations on the time permitted in the area. Workers directed to enter a treated area during the REI must have had the pesticide safety training so they may protect themselves. Employers must provide the PPE required by the product label for early entry to minimize exposure. Employers must provide early entry workers with the decontamination supplies appropriate for pesticide handlers.

EPA agrees with commenters that heat stress can be a problem for workers in warm, humid climes and when employees must wear PPE. EPA notes that requirements related to heat stress for early entry workers are already included in the existing rule at 40 CFR170.112(c)(6)(x) and 170.112(c)(7).

Comments in opposition to the early-entry exceptions. A number of farmworker advocacy organizations voiced opposition, in general, to most or all of the early entry exceptions in the existing rule, suggesting that workers should not be required to enter treated areas under an REI, due to risk of exposure.

EPA Response. In deciding whether to allow workers to enter treated areas prior to the expiration of the REI, EPA considered the risk to the workers and the benefits from the early-entry activities. In each case, EPA determined that the potential risks to properly trained and equipped early-entry workers are reasonable in comparison to the significant economic impacts from delaying necessary activities, provided that the required limitations to each exception are observed.

Comments on recordkeeping of oral notification. One farmworker advocacy organization supported the recordkeeping requirement, stating that the "proposed changes will ensure early entry workers are adequately informed about the risks of the work they are asked to do." In contrast, several states and their organizations expressed concern for the recordkeeping requirement, stating that it is not practical and would result in technical violations, such as failures to obtain the necessary signatures, without enhancing worker protection.

EPA Response. EPA was convinced by the rationale provided by the states that the requirement for records of notification to early-entry workers was too burdensome for agriculture, while adding little or no protections for the workers. There is typically some urgency to the need for entry into a treated area while the REI is in effect; the added burden to create records during this time could be unreasonable as it would not necessarily increase protection of early-entry workers. EPA retained the requirement for employers to provide protective information to early-entry workers, but did not include the proposed recordkeeping requirement because it is unclear that such records would improve the transmission of information.

B. Clarify Conditions of the "No Contact" Exception

1. Current rule and proposal. The existing WPS allows workers to enter areas while an REI is in effect for activities that do not result in contact with any treated surfaces. In the proposal, EPA sought to clarify the "no contact" requirement of the exception by explaining that performing tasks while wearing PPE does not qualify as "no contact." The proposal offered three examples of acceptable "no contact" activities.

2. Final rule. EPA has finalized the proposed clarification. The final rule adds to the exception the following language: "This exception does not allow workers to perform any activities that involve contact with treated surfaces even if workers are wearing personal protective equipment." The final regulatory text for this requirement is available at 40 CFR 170.603(a)(1).

3. Comments and responses.

Comments. One farm bureau stated that workers are prevented from having contact with pesticides and their residues through the medium of PPE.

EPA Response. Although PPE—when properly fitted, worn, removed, cleaned and maintained—can provide significant protection against pesticide exposures, it does not eliminate exposure. The variation in exposure reduction offered by various types of PPE can be seen in EPA's "Exposure Surrogate Reference Table" (*http://www.epa.gov/opp00001/science/handler-exposure-table.pdf*). Use of PPE for activities involving contact with pesticide-treated surfaces does not reduce risks to the same level as no-contact activities. EPA has finalized the "no contact" exception as proposed because the PPE appropriate for early entry into treated areas under this exception is appropriate only for activities that do not involve contact with treated surfaces.

C. Limit "Agricultural Emergency" Exception

1. Current rule and proposal. The existing WPS permits entry into a treated area during an REI when a state, tribal, or federal agency having jurisdiction declares the existence of conditions that could cause an agricultural emergency. EPA proposed that only agricultural emergency determinations by EPA, state and tribal pesticide regulatory agencies, and state departments of agriculture, could authorize early entry under the agricultural emergency exception.

In addition, EPA proposed to limit the time a worker may be in the treated area under the agricultural emergency exception when the label of the product used to treat the area requires both oral and written notification ("double notification"). Under the existing rule, there is no time limit; EPA proposed to establish allowing workers to be in a treated area under this exception for a maximum of 4 hours in any 24 hour period.

2. Final rule. EPA has finalized the proposal, with one change. The final rule does not include EPA as an agency with authorization to declare the existence of conditions that could cause an agricultural emergency because EPA decided that States and Tribes are best situated to decide what conditions in their respective jurisdictions could constitute an agricultural emergency. The final regulatory text for this requirement is available at 40 CFR 170.603(c).

3. Comments and responses.

Comments on restricting the declaration of an agricultural emergency. One state supported the proposal, but recommended broadening it to include the state governor. Another state found the proposal satisfactory. One grower organization opposed the proposal, stating that pre-approval to enter the treated area would be cumbersome and unnecessary if the criteria are clearly defined and documented. Another grower organization and a farm bureau from the same state expressed concern that this change would seriously impact growers' ability to enter a treated area to manage fires, fix broken irrigation and chemigation pipes, and address other problems that could pose risks to adjacent public areas and cause crop loss. These commenters recommended that EPA develop guidance to instruct relevant municipal agencies such as local fire departments to declare agricultural emergencies.

Commenters also suggested that there is a need for entities other than EPA, state departments of agriculture and the state pesticide regulatory agencies to declare agricultural emergencies. In the examples provided by commenters, fires and broken irrigation or chemigation pipes could pose risks to the public and the crop.

EPA Response. As described in the preamble to the proposed rule, EPA noted that entities other than the state pesticide regulatory agencies, state departments of agriculture, and EPA might not have the background and technical expertise to assess the benefits and risks to workers from the entry while the REI is in effect, and might not understand the statutory requirement to consider both risks and benefits when establishing conditions for early-entry workers. EPA decided not to include state governors as an entity authorized to declare an agricultural emergency because it is not necessary; a state governor could direct the state department of agriculture or pesticide regulatory agency to determine whether conditions that could result in an agricultural emergency exist.

The need for pre-approval for conditions that may result in an agricultural emergency is a requirement in the existing rule. EPA has responded to the concern of the grower organization through its Interpretive Guidance Workgroup on the existing WPS, which clarified that state pesticide regulatory agencies may establish guidance or regulations describing the circumstances that could constitute an agricultural emergency and for which entry into areas under an REI is permitted. If a grower determines that such conditions exist at a site, then workers may enter the area while the REI is in effect under the agricultural emergency exception, consistent with applicable restrictions.

EPA has decided not to expand the declaring agencies to include municipal agencies such as local fire departments, but will work with state pesticide regulatory agencies and departments of agriculture to support identification of circumstances that could constitute an agricultural emergency in their jurisdictions. EPA recommends that these entities identify, in their states, local conditions that could constitute such emergencies. Through state regulation or by policy, these agencies may pre-approve entry when such conditions occur.

D. Codify "Limited Contact" and "Irrigation" Exceptions

1. Current rule and proposal. EPA established "limited contact" and "irrigation" exceptions as administrative exceptions in 1995. Although these exceptions are noted in the existing rule at 40 CFR 170.112(e)(7), the terms and conditions of these exceptions are not included in the existing rule. These exceptions permit entry into a treated area during the REI for certain non-hand labor activities, including irrigation. The existing exception for irrigation requires that the need for the early entry be unforeseen.

EPA proposed to incorporate the terms and conditions for these exceptions into the final rule, and to eliminate the requirement for the need for irrigation to be unforeseen.

2. Final rule. EPA has finalized the rule as proposed. The final regulatory text for this requirement is available at 40 CFR 170.603(d).

3. Comments. Two farm bureaus specifically supported the codification of the limited contact and irrigation exceptions.

E. Eliminate the Option for an Exception Requiring Agency Approval

1. Current rule and proposal. Under the existing rule, an applicant may request approval from EPA for an exception to the prohibition on worker entry into a treated area during the REI for a specific need. EPA proposed to eliminate the process for requesting an exception from the rule.

2. Final rule. EPA is finalizing the proposal to eliminate the provision for exceptions requiring Agency approval.

3. Comments and responses.

Comment. One grower opposed the elimination of the provision, citing the evolution of farming practices and the potential for conflict between new practices and the rule. The commenter

stated that there is no administrative burden to the EPA, except to evaluate requests if they are submitted.

EPA Response. EPA included the administrative exception process into the WPS in 1992 in recognition that the general prohibition on routine early entry might significantly affect various agricultural entities or practices in ways that might only become apparent as the 1992 WPS was put into effect. EPA created a small number of exceptions during the 1990s, but none since 1997. The effects of reentry intervals on agricultural entities and practices are now sufficiently well understood that the administrative exception process is no longer needed in the WPS. As explained in the preamble to the proposed rule, EPA finds the pesticide re-evaluation process a more appropriate venue than the WPS for considering the economic impacts of REIs on particular agricultural entities and practices. Under EPA's registration review process, applicants may request alternative REIs for specific needs for their crop. This process takes into account the potential increased risk to workers and the benefits to the production of the crop. In cases where EPA finds that the revision of an REI is warranted, the product label will be amended to specify the REI for that particular use.

F. Costs and Benefits

1. Costs. EPA estimates the cost of implementing the requirement for oral notification prior to workers' entry into a treated area under an REI to be about $706,000 per year, or about $2 per establishment annually. EPA estimates that the revisions to the exceptions allowing entry into a treated area before the REI expires would have negligible cost, if any.

2. Benefits. EPA concludes that the benefit of providing detailed information about the tasks they are to undertake and the limitations on their exposure to the worker prior to entry into an area under an REI is reasonable compared with the cost.

XII. Display of Pesticide Safety Information

A. Pesticide Safety Information Content

1. Current rule and proposal. The existing rule requires employers to display a pesticide safety poster containing the following information:

- Avoid getting on your skin or into your body any pesticides that may be on plants and soil, in irrigation water, or drifting from nearby applications.
- Wash before eating, drinking, using chewing gum or tobacco, or using the toilet.
- Wear work clothing that protects the body from pesticide residues (long-sleeved shirts, long pants, shoes and socks, and a hat or scarf).
- Wash/shower with soap and water, shampoo hair, and put on clean clothes after work.
- Wash work clothes separately from other clothes before wearing them again.
- Wash immediately in the nearest clean water if pesticides are spilled or sprayed on the body. As soon as possible, shower, shampoo, and change into clean clothes.
- Follow directions about keeping out of treated or restricted areas.
- There are federal rules to protect workers and handlers, including a requirement for safety training.

The existing rule also requires the employer to provide contact information for the nearest emergency medical care facility and to promptly update the safety information poster when any of the required contact information changes.

EPA proposed changing the term for what employers must display from "pesticide safety poster" to "pesticide safety information." EPA proposed retaining the existing content requirements of the existing rule, with one exception. EPA proposed removing the item regarding federal rules to allow the other information to be more prominent. EPA proposed retaining the requirement to display the contact information for the medical facility and amending the language from "nearest emergency medical care facility" to "a nearby operating medical facility." Finally, EPA proposed requiring the employer to provide on the display the name, address, and telephone number of the state or tribal pesticide regulatory agency.

2. Final rule. EPA has finalized the proposed requirements for content, and has added a point to the proposed display requirements that advises workers and handlers to seek medical attention as soon as possible if they believe they have been made ill from pesticides. EPA has also amended one of the existing required points to clarify that if pesticides are spilled or sprayed on the body, workers and handlers should rinse immediately in the nearest clean water if more readily available than the decontamination supplies, and should wash with soap and water as soon as possible. The final rule refers to the requirement as "pesticide safety information" and allows display of the information in any format that meets the requirements of the rule, rather than only as a pesticide safety poster. EPA has included a requirement in the final rule for the employer to update the pesticide information display within 24 hours of notice of any changes to the medical facility or pesticide regulatory agency contact information. Finally, EPA has provided an option in the regulatory text that allows employers to comply by following the requirements at 40 CFR 170.311(a)(1)–(4) before they are fully implemented. The final regulatory text for these requirements is available at 40 CFR 170.311(a)(1)–(4).

The final rule delays implementation of the changes to the required pesticide safety information until two years after the rule is made final, in order to allow time for model pesticide safety information display materials to be developed and distributed.

3. Comments and responses.

Comments. Farmworker advocacy groups and public health organizations supported the emergency medical care change and inclusion of the state or tribal agency responsible for enforcement. However, they urged implementation sooner than the proposed two years from the effective date of the final rule. One commenter reported that a recent survey they conducted indicated that 25% of respondents did not complain about pesticide-related health problems or pesticide applications to the fields while they were working because they did not know to whom to complain and 62% feared losing their jobs if they were to complain.

In general, agricultural producer organizations did not object to the proposed changes for providing emergency medical information but two commenters were concerned about spurious reporting of alleged violations resulting from inclusion of the state or tribal regulatory agency in the pesticide safety information. Two commenters interpreted the proposal as requiring injured workers to contact state or tribal agencies responsible for enforcement for emergency medical attention. A grower organization pointed out that the nearest operating medical facility might change depending on the time of day and wondered if they needed to list hours of operation and addresses of all emergency medical care facilities in the area where the employer operates.

One commenter suggested the safety poster should always be in a standardized format and requested that EPA not allow the information to be displayed in several different formats.

EPA Response. EPA has concluded that there was general support for the proposed requirement regarding the content of the safety information display. EPA has delayed implementation of the final requirements for two years after

publication of the final rule to allow time for display material to be updated, printed and distributed. However, EPA encourages employers to implement the new requirements prior to that date by allowing employers the option to use the new safety information content.

In response to concerns about the placement of the medical facility information and the inclusion of regulatory agency information in the display, EPA has revised the regulatory text to clarify that the contact information about the medical facility must be clearly identified as the emergency medical contact information on the display. Displaying the regulatory agency information is important for the ability of workers and handlers to report possible violations, and in those states where it is already required, it does not appear to have generated spurious reporting of alleged violations. EPA appreciates that some states may already require employers to make such medical and regulatory information available and where state requirements meet or exceed the federal requirement, they do not need to be duplicated. However, EPA has added this requirement to the WPS to ensure the information is available to workers and handlers in all states.

EPA is finalizing the proposed requirement to identify a *nearby* operating emergency medical care facility to simplify the requirement in situations where the *nearest* operating emergency medical facility varies with the location of workers and handlers.

EPA disagrees with the comment requesting that the information be displayed in a standardized format. As long as the information is provided in a way that workers and handlers can understand, EPA sees no need to mandate a specific format.

B. Location of Pesticide Safety Information Display

1. Current rule and proposal. The existing rule requires agricultural and handler employers to display the pesticide safety poster at a central location on the establishment. EPA proposed to require that agricultural employers display the pesticide safety information at locations where decontamination supplies must be provided, in addition to the existing requirement to display it at a central location.

2. Final rule. In the final rule, EPA has amended the proposal to require that in addition to displaying pesticide safety information at a central location, employers must also display it at permanent decontamination supply locations and where decontamination supplies are provided in quantities to meet the needs of 11 or more workers or handlers. The final regulatory text for this requirement is available at 40 CFR 170.311(a)(5).

3. Comments and responses.

Comments. Farmworker advocacy organizations and public health organizations supported requiring display of pesticide safety information where decontamination supplies are provided for easy access to safety information for farm workers and families at strategic locations. They asserted that this would improve the ability of farmworkers and their families to stay healthy. They maintained that due to language barriers, immigration status, and fear of retaliation, farmworkers are often reluctant to ask their employers for information. Three individual farmworkers also commented on the proposed rule and echoed concerns expressed by farmworker advocacy groups and public health organizations. The commenters requested clear information in Spanish and English at a central location with easy access that includes telephone numbers, places to go for help, and hospitals in the area. They stated that it was important that employers give farmworkers the necessary information about the pesticide application without workers having to ask for information. About half of the grower organizations commenting had no objection to the additional mandate on employers and agreed that the additional reminders at decontamination sites have potential benefits.

The remaining grower organizations believed that the proposed requirement would pose a significant burden. One commenter stated that duplicating the pesticide safety information at multiple sites throughout an agricultural organization did not equate to a better training program and believed this requirement would likely result in additional fines for noncompliance without raising safety awareness. Some pointed out that workers are bused in for a day in the field and irrigators are sent to different areas by phone; none of these congregate at a central location.

Many states opposed displaying the pesticide safety information at decontamination sites. Because of the mobile nature of many decontamination sites, such as the back of a pickup truck, some noted the proposed requirement would be burdensome. One indicated that it would be difficult for a grower owning fields across multiple counties to keep the pesticide safety information accurate. They generally supported displaying the pesticide safety information at permanent decontamination sites and base of operation mix/load sites. Several states asked for clarification about what types of decontamination sites would be required to display the pesticide safety information and suggested that portable toilet facilities and plumbed wash sites would be more appropriate locations.

Others mentioned the lack of protection from the weather of the pesticide safety information at OSHA-required restroom facilities and the lack of access to this information when the vehicles carrying decontamination supplies are locked up at night. Two states recommended different sizes for the pesticides safety information. One state suggested that pesticide safety information displays be no larger than 11 x 17 inches and laminated to withstand at least one year's worth of weather conditions for use at decontamination sites; this state also recommended resizing the existing pesticide safety information to 8.5 x 11 inches or less and made of durable card stock or plastic for the agricultural workers to take home.

EPA Response. EPA agrees with the commenters who supported requiring safety information displays at a central location and anywhere decontamination supplies must be provided because the information is a useful reminder of the hygienic safety principles from their training. However, EPA was persuaded by arguments that the burden to display the information at mobile decontamination sites could be substantial, based on concerns for their ability to display the information so that it could be easily seen by workers, such as by posting it on a vertical surface. The final rule requires employers to display the information at the central display and all permanent sites, including a lavatory or bathroom, where decontamination supplies are provided to meet the requirements of the rule. However, for other locations where decontamination supplies must be provided, the pesticide information display is required only when the supplies are provided for 11 or more workers or handlers. This aligns with OSHA's field sanitation standard that requires toilet facilities for 11 or more workers. EPA notes that employers may use these portable toilet facilities or permanent wash sites to display the information, as recommended by some states.

EPA does not agree with the contention that requiring the pesticide safety information display at multiple locations would result in fines for noncompliance, without greatly benefiting the employee. The pesticide safety information display reinforces the

hygienic training principles from the safety training, and when coupled with access to decontamination supplies, offers a hands-on opportunity for workers and handlers to adopt these practices. Additionally, information about medical facilities available to workers where they may be exposed to pesticides may help them take steps to respond to an emergency.

EPA appreciates the comments regarding display size and options for lamination. The final rule does not establish a specific size for the information or require it to be laminated. However, the final rule requires the information to be legible at all times while it is displayed, and EPA expects that employers will opt for the optimal size and protection from the elements for their specific needs. Because the final rule limits the type of decontamination sites covered by this requirement and includes flexibility for identifying the regulatory agency and a nearby operating emergency medical care facility, it is possible but unlikely that some growers with larger establishments may need to provide different specific contact information about the regulatory agency and/or the medical facility, depending on the area where workers or handlers are working.

Commenters suggested the information be available in English and Spanish. EPA notes that the requirement is for the information to be provided in a manner that the workers and handlers can understand, which may include making it available in English and Spanish, or in other languages as appropriate.

EPA plans to develop and make available to agricultural and handler employers posters bearing the pesticide safety information, in a bilingual and pictorial format and with space for employers to add the required regulatory agency and medical facility information. As discussed in the proposed rule, the information does not have to be displayed as a poster as long as the display includes the required information and meets the requirements of the section.

C. Costs and Benefits

1. Costs. EPA estimates the cost of requiring additional pesticide safety information displays at permanent sites with decontamination supplies and at other locations where there are 11 or more workers or handlers and of requiring contact information on the display to be updated to be $390,000 annually, or about $1 annually per establishment per year.

2. Benefits. Workers and handlers will benefit from having access to information about basic pesticide safety at locations they are likely to visit. In addition, workers and handlers will benefit from having accurate information about nearby medical facilities and how to contact the state regulatory agency if necessary. EPA finds the costs from this requirement are reasonable when compared to the benefits of reminding employees about basic pesticide safety and hygienic practices at the sites where they routinely wash.

XIII. Decontamination

A. Clarify the Quantity of Water Required for Decontamination

1. Current rule and proposal. The existing rule requires employers to provide "enough water for routine washing and emergency eye flush" when workers are performing activities in areas where a pesticide was applied and the REI has expired. For early-entry workers, the existing WPS requires employers to provide "a sufficient amount of water" for decontamination. The existing WPS requires employers to provide handlers with "enough water for routine washing, for emergency eye flushing and for washing the entire body in case of an emergency." EPA proposed to require specific quantities of water for workers, early-entry workers and handlers based on its 1993 guidance, "How to Comply with the Worker Protection Standard for Agricultural Pesticides; What Employers Need to Know." In the guidance, EPA recommended one gallon of water per worker for routine decontamination, three gallons of water for early-entry workers for decontamination and three gallons of water per handler for routine handwashing and potential emergency decontamination.

EPA requested comment on the proposed quantities of water and the use of waterless cleansing agents in place of soap, water, and single-use towels. EPA also requested information on the efficacy of waterless cleansing agents for removing pesticide residues.

2. Final rule. EPA has finalized the proposed decontamination water requirements. EPA has also clarified that employers must make the required quantities of water and other decontamination supplies available at the beginning of the work period. The final rule does not allow waterless cleansing agents to be used in place of water, soap, and single-use towels. The final regulatory text for these requirements is available at 40 CFR 170.411(b), 170.509(b) and 170.605(h).

3. Comments and responses.

Comments. A majority of commenters supported the proposal to require one gallon of water per worker for routine decontamination, three gallons of water for early-entry workers for decontamination and three gallons of water per handler for routine washing and emergency decontamination but many requested clarification of the time frame associated with the supply; they wondered if the prescribed amounts were the maximum quantity per site or per number of workers, the minimum amount at the beginning of the day or at all times during the work period. Six commenters were in favor of replacing soap and water with a waterless cleansing agent. One commenter noted such a substitution would be effective for workers but not handlers; another suggested that these agents might be less bulky than the existing required supplies. One commenter provided information on a specific waterless cleansing agent.

EPA Response. EPA notes that the proposed quantities of water for decontamination are intended for agricultural settings that are not subject to the field standards of OSHA and the American National Standards Institute (ANSI). Based on comments, EPA has clarified the final rule to require that the specified amount of supplies be available at the beginning of the work period and that they are to be calculated per worker and per handler. The final rule does not require the replenishment of used supplies until the beginning of the next work period. The information supplied by commenters was insufficient to convince EPA to replace water, soap, and single-use towels with a waterless cleansing agent. The one waterless cleansing agent discussed in the comments had limited use since the information indicated it could be used to remove only one family of pesticides; workers and handlers are likely to encounter residues from various families of pesticides.

B. Eliminate the Substitution of Natural Waters for Decontamination Supplies

1. Current rule and proposal. For sites where worker or handler activities are farther than one-quarter mile from the nearest vehicular access, the existing rule permits employers to allow workers and handlers to use clean water from springs, streams, lakes or other sources ("natural waters" for the purposes of this section) for decontamination, if such water is more accessible than the employer-provided water. The employer must ensure any water used for decontamination, including natural waters, is of a quality and temperature that will not cause illness or injury. EPA

proposed to eliminate the provision that allows employers to permit workers and handlers to substitute natural waters for the required decontamination supplies at remote sites. For remote sites, the proposal would have maintained the existing requirement for employers to provide all decontamination supplies (soap, single-use towels, clean change of clothing and water) at the nearest point of vehicular access. However, the existing regulation does not permit substitution of waters from natural sources for the decontamination water at the point of nearest vehicular access, and EPA's proposed change mischaracterized the existing requirements.

2. Final rule. In the final rule, EPA has removed from the regulatory text the provision that allows employers to permit workers and handlers to use clean water from springs, streams, lakes or other sources if that water is more accessible in remote locations where the decontamination supplies are farther than one-quarter mile from where workers and handlers are working. EPA is taking this approach to remove confusion about the employer's responsibilities. The employer must always provide the decontamination supplies in quantities outlined in the regulation. When workers or handlers are performing tasks at remote sites more than one-quarter mile from the nearest point of vehicular access, employers must provide all required decontamination supplies (soap, single-use towels, and water, plus clean change of clothing if required) at the nearest point of vehicular access. Under the final rule, employers are required to make the decontamination supplies available as close as possible to the remote site (as determined by how close a vehicle can get) and employers do not have to check or confirm that water from springs, streams, lakes or other sources at remote sites meets the standard of being of a quality and temperature that will not cause illness or injury. EPA has amended the training requirements to cover the proper use of natural waters at remote sites by workers and handlers. EPA believes that workers and handlers in these remote areas should primarily rely on the decontamination water that is provided by the employer for routine washing and emergency decontamination because the quality of the natural waters at the remote site is unknown. In case of an overexposure, such as a spill, contact from drift, or direct spray, workers and handlers should always use the emergency decontamination supplies if they are more readily available. However, training will emphasize that workers or handlers should rinse immediately using the nearest source of clean water to mitigate the exposure, and to use the nearest source of clean water, including springs, streams, lakes or other sources, if more readily available than the decontamination supplies. Workers and handlers will be advised through training that as soon as possible they should decontaminate thoroughly with the soap, water and towels provided by the employer and, if available, change into clean clothes. EPA plans to modify training materials to incorporate this information. The final regulatory text for worker and handler decontamination is available at 40 CFR 170.411(b)(1), 170.509(b)(1), and 170.605(h)–(j).

3. Comments and responses.

Comments. Many commenters supported not using natural waters to replace the required decontamination supplies. Two states, a farmworker advocacy organization, and a grower organization supported the need for employees to access the nearest clean water in case of an exposure. Some farmworker advocacy organizations expressed concern that the quality of the natural waters might be questionable and not the best choice for decontamination.

Finally, one farm bureau commenter stated that large scale planting activities can place workers more than one-quarter mile from vehicular access, and retaining the existing requirement is more reasonable than expecting workers to carry washing water with them.

EPA Response. EPA maintains its position that the employer-provided decontamination supplies, provided within one-quarter mile of the workers and handlers—or in remote areas, at the nearest point of vehicular access to worker and handler work sites—are the appropriate supplies for routine washing and emergency decontamination. The employer must ensure this water meets the minimum criteria for quality. However, EPA agrees with commenters that prompt washing in clean water is an important step in reducing overexposure, for example, from a spill, contact from drift, or direct spray. EPA has identified acute incidents that would have been mitigated if the exposed worker or handler had decontaminated promptly. EPA is concerned that the existing requirements for employers to ensure the quality of natural waters prior to its use and for them to permit its use will prevent workers and handlers from using these waters to decontaminate in case of an emergency. Ensuring the quality of all natural waters on their establishment could be burdensome for employers, and as a result they might not evaluate the quality or permit the use of natural waters.

To ensure that workers and handlers needing emergency decontamination can use water that is more accessible than the decontamination water provided by the employer, the employer no longer must predetermine that the quality of the water meets the criteria or permit their employees access. The rule permits the use of natural waters for emergency decontamination, but does not require it. Workers and handlers seeking to mitigate an emergency exposure will be informed in their training to use the nearest clean water to immediately rinse off if such water is more readily available than the employer-provided decontamination supplies, and then go to where the employer-provided supplies are to fully decontaminate. EPA believes the benefits of using natural clean waters to decontaminate immediately in an emergency pesticide exposure situation outweighs the potential risks of making workers or handlers wait until they can use supplied decontamination water that has been evaluated for quality but may be less available to immediately address the exposure. EPA thinks that washing in natural waters in any agricultural area is unlikely to pose risks comparable to a significant direct pesticide exposure.

C. Requirements for Ocular Decontamination in Case of Exposed Pesticide Handlers

1. Current rule and proposal. The existing rule requires employers to provide "enough" water to handlers for routine and emergency washing and emergency eye flushing. For handlers who use products that require eye protection, employers must provide each handler with at least one pint of water that they can carry for use in the event of an ocular pesticide exposure. EPA proposed to require employers to provide clean, running water at permanent (*i.e.*, plumbed and not portable) mixing and loading sites for handlers to use in the event of an ocular pesticide exposure when using a pesticide with labeling that requires eye protection.

2. Final rule. Under the final rule, employers must provide water for ocular decontamination either through a system capable of delivering 0.4 gallons/minute for at least 15 minutes or from six gallons of water able to flow gently for about 15 minutes. This water must be available at all mixing and loading sites where handlers are mixing or loading a product that requires eye

protection or when closed systems, operating under pressure, are in use. The final rule amends the existing requirement for employers to provide at least one pint of water per handler in portable containers that are immediately available to handlers applying the pesticide, rather than to all handlers mixing, loading and applying pesticides, if the pesticide labeling requires protective eyewear. The final regulatory text for these requirements is available at 40 CFR 170.509(d).

The term "potable" in the preamble and regulatory text for the proposed rule was a typographical error and has been corrected to "portable" in the final rule.

3. Comments and responses.

Comments. There was general support for this proposal. Many commenters urged EPA to adopt or coordinate with American National Standards Institute (ANSI) standard Z358.1–2009 and/or the OSHA requirements, 29 CFR 1928.110, as several states have done. Many requested a definition of "permanent mixing and loading site" and "a system capable." Some qualified their support based on the inclusion of "nurse rigs," "nurse tanks" and "gravity-fed tanks" in the final rule. Commenters also explained that much of the mixing and loading is done in the field rather than at a site with running water. Other commenters wondered if the water for decontamination needed to be potable.

EPA Response. The OSHA standard at 29 CFR 1910.151(c) specifies that ". . . where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided . . .". The ANSI standard provides specifications for two types of eyewash stations, plumbed and gravity-fed. The specifications describe a system with a precise rate of flow (0.4 gallons/minute for 15 minutes), that can activate in 1 second or less and does not require the user to control the flow of water. While the OSHA and ANSI standards are very protective, EPA believes that the final rule requirements provide handlers with mitigation appropriate to pesticide exposure in agricultural settings at significantly lower costs than the ANSI standards. Based on the comments, EPA realized that there might have been some confusion regarding the nature of permanent mixing and loading sites, the plumbing associated with non-permanent mixing and loading sites, and the quality of the water required. In the final rule, EPA decided to apply the requirements to all mixing and loading sites where pesticides whose labeling requires protective eyewear are handled because the risk to handlers who mix and load these products is the same, regardless of where they perform the tasks. Rather than specify what types of water tanks or eye wash systems would comply with the requirement, EPA opted for flexibility. The final rule allows employers to provide either at least 6 gallons of water in containers suitable for providing a gentle eye flush for about 15 minutes, or a system capable of delivering gently running water at a rate of 0.4 gallons per minute for at least 15 minutes to satisfy the requirement. One emergency eyewash system is required at a mixing/loading site when a handler is mixing or loading a product whose labeling requires protective eyewear for handlers, regardless of how many handlers are mixing or loading at that site. The final retains the existing requirement for water to be of "a quality and temperature that will not cause illness or injury."

D. Showers for Handler Decontamination

1. Current rule and proposal. The existing rule establishes specific requirements for routine and emergency handler decontamination supplies, but these requirements do not include shower facilities. EPA considered but did not propose a requirement for handler employers to provide shower facilities.

2. Final rule. EPA has not included in the final rule a requirement for employers to provide shower facilities for handlers.

3. Comments and responses.

Comments. Many commenters supported the proposal for not providing shower facilities for handlers while others requested that EPA require employers to provide shower facilities for handlers. Those against adding the shower requirement noted the provision would not necessarily guarantee use in order to reduce take-home or handler exposure. Those supporting a requirement for shower facilities indicated that handlers would use them if they were provided. Both groups, however, agreed that better training and adequate information on reducing take-home exposure, as suggested by EPA, would be a better approach.

EPA Response. EPA agrees that additional training for handlers and clarified decontamination provisions such as the provision of at least 3 gallons of water per handler for routine and emergency washing, available at the beginning of the day, would help reduce take-home exposure without requiring shower facilities. The estimate of the cost of installing showers as provided in the proposal, combined with the lack of confidence that most handlers would routinely use showers if provided, led to the conclusion that a shower requirement would be unlikely to reduce risks to an extent commensurate with the costs.

E. Costs and Benefits

1. Costs. EPA estimates the total cost of the revisions to the decontamination requirements to be approximately $412,000 annually, or about $1 per establishment per year, CPHEs $21 per establishment per year.

EPA does not believe there will be any cost associated with deleting the provision allowing employers to direct workers and handlers to use natural waters in addition to the decontamination supplies required by the rule. The final rule still allows workers and handlers to use clean, natural waters, but removes employers' obligation to ensure that the water is of a temperature and quality that will not cause harm.

Because EPA is not imposing a requirement for employers to provide shower facilities for handlers, there is no estimated cost. Refer to the Economic Analysis of the proposed rule for details regarding the estimated cost of requiring showers for handlers (Ref. 14).

2. Benefits. EPA expects that workers and handlers will benefit from having access to sufficient supplies for routine washing and decontamination. In addition, handlers will benefit by having sufficient water available to rinse their eyes in the event of an accident while mixing or loading certain pesticides. Employers will benefit from certainty about the amount of water that they must supply and when that water must be available.

XIV. Emergency Assistance

A. Current Rule and Proposal

The existing WPS requires employers of workers or handlers, including those handlers employed by the agricultural establishment or those working for a pesticide handling establishment, to provide prompt transportation to an emergency medical facility to employees who have been poisoned or injured by exposure to pesticides used on the establishment. Emergency medical assistance under the existing rule consists of the prompt provision of transportation to an emergency medical facility for the worker or handler and the provision of obtainable information about the exposure, including information about the product(s) that may have been used, to emergency

medical personnel or the exposed employee.

EPA proposed to require agricultural and handler employers to provide emergency medical assistance within 30 minutes after learning that an employee may have been poisoned or injured by exposure to pesticides as a result of his or her employment, replacing the current standard of "prompt." The proposed change was intended to ensure that the potentially injured party would be on route to a medical facility within 30 minutes.

EPA also proposed that the employer provide a copy of the pesticide label, or specific information from the label, along with the SDS and circumstances of the pesticide use and potential exposure, to employees potentially injured by exposure to pesticides and to treating medical personnel.

B. Final Rule

EPA has retained the existing requirement for providing transportation and information promptly. The final rule clarifies that these requirements apply only to current or recently employed workers, and that emergency assistance must be provided if there is reason to believe that a worker or handler has been potentially exposed to pesticides or shows symptoms of pesticide exposure.

EPA has amended the requirement for the information that the employer must provide related to emergency assistance. The final rule requires the employer to provide to treating medical personnel a copy of the SDS, product name, EPA registration number and active ingredient for each pesticide product to which the person may have been exposed, as well as the circumstances of application or use of the pesticide on the agricultural establishment and the circumstances that could have resulted in exposure to the pesticide. This is a slight change to the existing rule which makes the information available to the worker or handler. In this final rule, the worker or handler has access to the information through the hazard communications requirement. This provision deals specifically with meeting the needs for medical assistance, and requires that the information be provided to the medical personnel.

EPA has clarified in the final rule that the provision of the emergency assistance requirement for transportation and information applies only to currently employed workers seeking emergency medical assistance or recently employed workers within 72 hours after their employment for acute exposures occurring on the agricultural establishment.

The final regulatory text for these requirements is available at 40 CFR 170.309(f) and 170.313(k).

Readiness is among the most important factors in an employer's ability to promptly carry out the emergency assistance requirements. EPA strongly encourages employers to develop an emergency response plan and to address in such a plan details related to the emergency medical assistance requirements of the WPS. EPA also encourages employers to periodically test, evaluate and, if necessary, update the plan. EPA will develop a sample plan to help employers prepare for possible pesticide-related emergencies. Employers can also find additional information concerning the development and implementation of an emergency preparedness program at the U.S. Department of Homeland Security's Web site, *http://www.ready.gov/business/*.

Although EPA believes that it is important for employers to develop emergency response plans, EPA has not made this a requirement of the final rule. EPA recognizes that pesticide exposure is just one of many hazards that should be addressed in an emergency response plan, and that EPA has very little information about the extent of emergency planning in the agricultural community. Accordingly, EPA has decided that it would be unwise to address this issue in the WPS without the benefit of a more robust dialogue with all stakeholders.

C. Comments and Responses

Comments. Many private citizens and farmworker advocacy organizations, some pesticide state regulatory agencies and several public health organizations supported the proposal to require agricultural employers and handler employers to provide emergency medical assistance within 30 minutes after learning that an employee may have been poisoned or injured by exposure to pesticides as a result of his or her employment, replacing the current standard of "prompt." They stated that the clarification of time for the provision of transportation and information would improve the safety of farmworkers.

The Progressive Congressional Caucus, many farmworker advocacy organizations and public health organizations expressed concern that the proposed emergency response time of 30 minutes is too long and recommended that it should be further reduced. Commenters reasoned that pesticide poisoning can be fatal or result in long-term effects if not quickly treated.

On the other hand, many commenters, mostly growers and farm bureaus, and some states and agricultural producer organizations expressed opposition to the proposal and favored retaining "prompt " to allow more flexibility due to geographical constraints. The Small Business Administration's Office of Advocacy stated that small farms that are farther away from medical facilities would not be able to obtain emergency transportation within the timeframe. Those with few employees and limited transportation options would be overburdened in attempting to comply with a 30 minute timeframe.

Commenters representing many states, several agricultural industries, many growers and farm bureaus, and the Small Business Administration's Office of Advocacy recommended that emergency response requirements should apply only to current employees seeking emergency medical assistance for acute incidents.

Additional comments from states and their organizations recommended that the agriculture emergency requirement address only acute exposures to current employees of the establishment. They raised concerns for the potential for former employees or those with exposures in the past to request emergency assistance. One commenter stated that allowing any person who was ever employed by the establishment the ability to demand emergency assistance could cause problems with compliance and enforcement. Some of these organizations requested clarification of the term "emergency medical facility."

Commenters also recommended that the requirement allow, similar to OSHA, trained first aid providers on the establishment to provide care, which could enable more timely treatment.

Commenters noted that requiring the employer to provide the label to employees potentially injured by exposure to pesticides and to treating medical personnel could lead to further exposure, if the employee takes an open container of pesticides bearing the label. Further, commenters suggested that the information outlined in the proposal could be obtained from sources other than the label.

EPA Response. EPA was convinced by the concerns raised by members of the agricultural community that geographical constraints, in some cases, would make the 30 minute response timeframe for transportation difficult or impossible to meet. Agricultural establishments can be very large and are

often distant from population centers. Remote locations, including those in forestry, are common; and the distance to an emergency medical facility or to an ambulance service can be significant.

The final rule requires employers to comply with the emergency assistance requirements by promptly making transportation available to an emergency medical facility for potentially injured employees and providing the SDS, specific product information, and information about the exposure to the treating medical personnel. Because the information about the pesticide may be critical to effectively manage the illness, EPA decided to focus the requirement to ensure that treating medical personnel receive the information. The agricultural employer must provide that information in a way that is reasonably expected to be accessible to the treating medical personnel. The requirement does not preclude the employer providing the information to injured employees and does not prevent injured employees from requesting this information. This requirement will allow continued flexibility for employers and encourage timely medical treatment for potentially injured employees.

In deciding to retain the requirement for prompt provision of transportation, EPA also took into consideration OSHA's standard for the provision of transportation to persons in construction, which requires "Proper equipment for prompt transportation of the injured person to a physician or hospital." 29 CFR 1926.50(e).

EPA agrees with the recommendation to clarify that the requirement applies only to current or recently employed workers seeking emergency medical assistance for acute exposures occurred at the agricultural establishment, and has revised the final rule accordingly.

EPA notes that for some cases of suspected pesticide injury, the attention of a trained first aid provider can mitigate the injury. Such treatment would not negate the obligations of the employer to provide transportation promptly to an injured employee, or to provide information about the pesticide and exposure to medical personnel, but is encouraged. Allowing a competent first aid provider to administer timely treatment to an injured employee could offset complications from longer exposures.

EPA agrees with comments that a requirement to provide the label in the event of an emergency could be burdensome and place employees at risk for additional exposure if the label is attached to an open container of pesticides. EPA has not included the proposed requirement to provide the label or information from the label; rather, the final rule requires the employer to provide the necessary information, but does not specify the source of the information. EPA has removed from the list of specific pieces of information the employer must provide information about antidote, first aid, and recommended treatment because the SDS contains this information. EPA notes that the information about the product and the SDS will be available as part of the pesticide application and hazard information.

In response to the requests for clarification of what qualifies as an emergency medical facility, EPA notes that a hospital, clinic, or infirmary offering emergency health services qualifies.

Finally, the employer must provide information about the pesticide and the exposure to the treating medical personnel.

D. Costs and Benefits

There are no incremental costs associated with the decision to retain the requirement of prompt provision of transportation in the existing rule. The cost associated with the SDS were included in the costs for the pesticide application and hazard information. There are significant benefits to reducing damage from pesticide exposure by prompt medical attention.

XV. Personal Protective Equipment

A. Respirators: Fit Testing, Training and Medical Evaluation

1. Current rule and proposal. The existing regulation requires handler employers to ensure that each handler's respirator fits correctly. However, the existing rule does not provide specific details on ensuring that a respirator fits properly, nor does it require employers to conduct medical evaluations of the handler's fitness for respirator use, provide training on the proper use of respirators, or retain fit test records.

EPA proposed to require handler employers to comply with the respirator fit testing, training, and medical evaluation requirements set by OSHA at 29 CFR 1910.134 whenever a respirator other than a dust or mist filtering mask is required by the labeling. EPA did not propose any new requirements for filtering facepiece respirators (OSHA's term for dust or mist filtering masks). The OSHA standard includes a specific standard for fitting a user for respirator use, training on recognizing when the respirator seal may be broken, and what steps to take to properly use and maintain respirators. OSHA also requires respirator users to be medically evaluated to ensure the respirator use does not cause undue stress on their bodies. EPA proposed to require that employers comply with the OSHA requirements for fit testing, training, and medical evaluation by cross-referencing 29 CFR 1910.134, in order to avoid creating a duplicative regulation and to ensure that if technology advances lead OSHA to amend its standard, the change would automatically apply to pesticide uses subject to the WPS as well. EPA also proposed to require handler employers to maintain records of the fit test, training, and medical evaluation for two years.

2. Final rule. EPA has retained the proposed elements in the final rule, with some changes and clarifications. Specifically, the final rule cross references and requires compliance with the OSHA standards for fit testing, training, and medical evaluation when a respirator is required by the labeling. The final rule expands from the proposal the types of respirators covered by the requirement to include filtering facepiece respirators. The final rule also adds an additional item to the list of conditions that would trigger replacement of the gas- or vapor-removing canisters or cartridges.

In the final rule, EPA has retained the proposed requirement for handler employers to maintain records of the fit testing, medical evaluation, and training. The final rule clarifies that the required training is limited to the care and use of respirators, 29 CFR 1910.134(k)(1)(i)–(vi), and does not include the training on the general requirements (*i.e.*, 29 CFR 1930.134(k)(1)(vii)).

The final regulatory text for these requirements is available at 40 CFR 170.507(b)(10) and 170.507(d)(7).

3. Comments and responses.

Comments. EPA received many comments in favor of requiring handler employers to comply with the respirator fit testing, training, and medical evaluation requirements established in the OSHA standard. Many farmworker advocacy organizations and some PPE manufacturers asserted that EPA should also apply the proposed standards for fit testing, training, and medical monitoring to users of filtering facepiece respirators in addition to the other respirator types (*e.g.*, tight fitting elastomeric facepieces). Commenters suggested that filtering facepiece respirators are widely used and covered by OSHA's respirator requirements, and that their exclusion would result in inadequate protection for many pesticide handlers. OSHA defines a filtering facepiece as "a negative

pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium'' in 29 CFR 1910.134(b).

Furthermore, many farmworker advocacy organizations stated that EPA should require compliance with all elements of 29 CFR 1910.134, rather than the proposal to just include fit testing, training, and medical evaluation. Specifically, they urged EPA to adopt OSHA's requirements for employers to develop a respiratory protection program (29 CFR 1910.134(c)) and conduct a workplace hazard evaluation (29 CFR 1910.134(d)(1)(iii)).

Nearly all commenters expressed support for a general requirement related to proper respirator care and use, such as appears in the existing rule. However, many pesticide manufacturers and their associations, state farm bureaus and agricultural producer organizations questioned the feasibility of the proposed requirement for medical evaluations because locating qualified physicians practicing in rural areas would be difficult. Other farm bureaus noted that the OSHA standard applies to general industries, shipyards, marine terminals, longshoring and construction, and it would not likely be easily adopted in agricultural settings. Some commenters, including the Small Business Administration's Office of Advocacy, also asserted that EPA's cost estimates associated with the medical evaluations and fit testing were too low.

Some commenters, including a state farm bureau, raised concerns that EPA's reference to OSHA's regulations could give OSHA legal grounds to pursue oversight of certain small farming operations, contrary to provisions of existing law.

EPA Response. In the final rule, EPA has required that employers comply with the respirator fit testing, training, and medical evaluation requirements described in the proposed rule when the use of respirators is required by the labeling. The final rule also expands its coverage to include filtering facepiece respirators (referred to as dust/mist filtering respirators in the proposal). EPA included filtering facepiece respirators in the final rule to ensure that handlers required to use any type of respirator are adequately protected. Filtering facepiece respirators need to be fit tested and used properly to provide the intended protection. In addition, this will ensure that respirators used under the WPS provide the same level of protection as comparable respirators used under OSHA's respiratory protection requirements.

EPA acknowledges that, if the final rule were to require handler employers to comply with the OSHA requirement to adopt a worksite-specific respiratory protection program, such a requirement would address in detail the selection, cleaning, storing, repair and replacement of respirators, as well as worksite-specific procedures when respirator use is required. EPA has decided not to expand the final rule to include the OSHA requirement to adopt a worksite-specific respiratory protection program because specific respirator requirements are described on EPA-approved, product-specific pesticide labeling. These product-specific respirator requirements are based on the acute inhalation toxicity of the end-use product or a comprehensive risk assessment informed by incident data, or on extensive pesticide active ingredient toxicology data, exposure science and epidemiology data (if available), or on both. Therefore, requiring a general worksite-specific respiratory protection program would duplicate the analysis underlying product-specific respirator requirements included on pesticide labeling.

EPA acknowledges that implementing respirator fit testing, training, and medical evaluation in agriculture will place additional burden on agricultural employers. However, the proper fit and use of respirators is essential in order to realize the protections respirators are intended to provide. EPA's pesticide risk assessment process relies on National Institute for Occupational Safety and Health (NIOSH) protection factors (*i.e.,* respirators used according to OSHA's standards) when deciding whether handler inhalation exposure can be mitigated by respirator use. If the handler inhalation exposure can be mitigated by a particular type of respirator, EPA may require the use of that respirator on the pesticide label, among other risk mitigation measures. Without the protection provided by the respirators identified on the label, use of those pesticides would cause unreasonable adverse effects on the pesticide user, *i.e.,* the handler.

EPA is aware of several states, including California, Oregon and Washington, that have successfully incorporated all aspects of the OSHA standard for respirators in agriculture, demonstrating the feasibility of applying OSHA's requirements in agriculture. North Carolina has incorporated many innovative ways to facilitate the medical evaluation and fit testing process, and helped farmers (including handler employers) locate reputable sources for online services for fit testing and medical evaluation, and sources for NIOSH-approved respirators, filters, and cartridges. EPA plans to work with stakeholders such as state regulatory agencies, universities, and others to provide outreach assistance such as training programs and written materials and to encourage the dissemination of information about fit testing and medical evaluation resources.

EPA has reviewed and revised its cost estimates for fit testing, training and medical evaluation. The cost estimate assumes that farms would designate one handler to be fit tested so the incremental costs for the filtering facepiece respirators reflects the need to fit test and train on multiple types of respirators. The increased costs also reflects the cost of the on-line medical evaluation, which replaces the estimated time of a medical technician reviewing the evaluation, and the cost of the employer's time to arrange (if off-site) or oversee (if on-farm) the evaluation and fit test, which was previously omitted. EPA has also updated wages, price of materials and services such as the cost of the medical evaluation and the fit test materials. Details of the revised estimate are available in the Economic Analysis for this final rule (Ref. 1).

EPA recognizes that some handlers may not be able to use a tight-fitting respirator. EPA notes that the purpose of the medical evaluation is to ensure handlers are able to tolerate the physical burden caused by the use of respirators. Many medical conditions, such as cardiovascular diseases and the reduced pulmonary function caused by smoking, could impede the ability of the handler to wear a respirator without adverse health impacts. The medical evaluation should identify these potential issues and disqualify the handler from using a tight-fitting respirator. Tight fitting respirators include filtering facepiece respirators, full and half face elastomeric respirators and tight fitting powered air purifying respirators (PAPR). However, for these handlers, loose-fitting PAPRs are an option for respiratory protection because they do not require medical evaluations or fit testing. EPA notes that many handler employers may be able to rely on online services where medical evaluations can be performed by relying on medical questionnaires. The employee would complete the medical questionnaire, which would be provided to the licensed medical professional for review. If the employee is cleared by the review, he or she is approved to wear a respirator. If the employee is not cleared through the review of the questionnaire, the employer may send the employee for further medical review

or the employer may identify a different employee to handle the pesticide.

EPA does not believe that including in the WPS a requirement that employers must perform respirator fit testing, training, and medical evaluation in accordance with OSHA's requirements by cross-reference to 29 CFR 1910.134 affects the scope of OSHA's jurisdiction. This final rule changes only the FIFRA WPS, which is implemented and enforced by EPA, the States and Tribes, and not by OSHA.

However, in consideration of the commenters who asked that EPA require compliance with all elements of OSHA requirements at 29 CFR 1910.134, the Agency re-evaluated other elements of that regulation. As part of that re-evaluation, EPA identified an inconsistency between the Agency's proposal and OSHA's requirements concerning a change schedule for the replacement of the gas- or vapor-removing canisters or cartridges. Specifically, OSHA requirements address change schedules that utilize NIOSH end-of-service-life indicator designations (29 CFR 1910.134(d)(3)(iii)(B)(2)). To ensure respirator protections are of greater consistency across industries, EPA has added the OSHA requirement that triggers the replacement of the gas- or vapor-removing canisters or cartridges to the list of conditions in the final rule at § 170.507(d)(7) through an incorporation by reference.

4. Costs and benefits. EPA estimates the cost to employers of complying with the WPS respirator requirements that cross-reference the OSHA standard would be $10.6 million annually, or about $43 per year, on average, for agricultural establishments with handlers and about $8 for commercial pesticide handling establishments per year. On family-owned farms that use pesticides and do not hire labor, the estimated annual cost of the respirator requirements is approximately $9 per establishment per year. As explained previously, the estimated cost increased in the final rule because the cost analysis was revised to account for handlers to be fit tested and trained to use multiple types of respirators, the cost of an on-line medical evaluation, and the employer's time to arrange for the fit testing, evaluation and training. EPA assumes that about 30 percent of handlers working on 60 percent of farms that employ handlers will be fit tested in any year; the average cost per farm reflects this assumption. The cost to commercial pesticide handling establishments only reflects the cost of recordkeeping because EPA assumes that they already comply with OSHA's respirator requirements because they engage in activities outside of the scope of the WPS that are covered by OSHA. The cost estimates for agricultural establishments are very conservative because of broad assumptions regarding the number of handlers and farms affected, and the fact that some establishment owners are already required to comply with OSHA requirements related to respirator use for other reasons.

EPA cannot quantify the benefits associated with this specific requirement. However, ensuring that handlers can safely use respirators and that those respirators fit properly will increase the protections offered by respirators to the levels presumed in EPA's pesticide registration decisions. This should lead to a reduction in occupational pesticide-related illnesses. In comparison to these expected benefits of proper respirator use and reduced illnesses, the costs associated with the final rule requirements appear to be reasonable.

B. Chemical-Resistant PPE

1. Current rule and proposal. The definition for "chemical resistant" in the existing WPS is a "material that allows no measurable movement of the pesticide being used through the material during use." Prior to the proposed rule, EPA received many comments from stakeholders suggesting that there was no way for agricultural employers, handlers, early-entry workers, pesticide educators and inspection personnel to ensure the PPE being used was "chemical resistant." EPA proposed requiring employers to provide PPE defined by its manufacturer as chemical resistant.

2. Final rule. EPA has rejected the proposed change. The final rule retains the existing definition of chemical resistance. The final regulatory text for this requirement is available at in 40 CFR 170.507(b)(1).

3. Comments and responses.

Comments. While several commenters representing states and academia supported the idea of PPE manufacturers defining chemical resistant in principle, many also questioned the feasibility of such an approach. Specifically, the commenters questioned whether manufacturers can reliably label PPE as chemical resistant in a permanent manner that would be easy for enforcement personnel to check during inspections. Several other commenters from pesticide manufacturers and PPE manufacturers suggested such claims may not be able to be made for the wide range of pesticide formulations and active ingredients. One PPE manufacturer asserted that the existing definition was purposefully worded to ensure worker protection and that EPA's proposal over-simplifies a very complex and critical issue. Many other commenters reiterated this latter comment regarding over-simplification of the process for developing chemical resistant PPE.

EPA Response. EPA recognizes the many comments highlighting the challenging issues involved with having PPE being defined as chemical resistant by the equipment manufacturer, who does not know the ingredients in every pesticide product. EPA agrees with commenters that the proposed approach would create more problems than it would resolve. Therefore, the final rule retains the existing chemical resistant definition.

4. Costs and benefits. Because EPA is retaining the current definition of chemical resistant, there are no estimated costs.

C. Contaminated PPE

1. Current rule and proposal. The existing WPS requires employers to ensure that PPE is cleaned before each day of reuse. If the article cannot be properly cleaned, the employer must dispose of it in accordance with applicable Federal, State, and local regulations. EPA proposed to add a requirement for employers to render unusable contaminated PPE that cannot be properly cleaned before it is disposed.

2. Final rule. In the final rule, the employer must ensure that contaminated PPE is made unusable as apparel or disposed of in such a way that it is unavailable for further use. EPA has also included in the final rule a requirement for the person who cleans, disposes, or otherwise handles the contaminated PPE to wear the gloves required for mixing and loading the pesticide that contaminated the PPE. The final regulatory text for this requirement is available at 40 CFR 170.507(d)(2).

3. Comments and responses.

Comments. Prior to the proposed rulemaking, state pesticide regulatory agencies expressed concern that unless proper measures are taken, contaminated PPE might be reused either as PPE or simply as a garment, placing the person wearing it at risk from pesticide exposure. In support of the proposal, one public health organization commented that rendering contaminated garments unusable would prevent adverse health effects. A state noted that the proposal was an effective method to reduce the potential for access to contaminated PPE. One grower

organization noted that the potential for exposure exists when individuals cut or render contaminated PPE unusable, and suggested a requirement to seal the contaminated PPE in a disposal container and to dispose of the container in an appropriate manner.

In contrast, some grower organizations stated that the current requirement is adequate and EPA should not adopt the proposal. Some farm bureaus opposed the proposal and thought the concern for individuals gaining access to contaminated PPE was well meaning yet hypothetical. Some of these commenters suggested it could lead to confusing violation scenarios, specifically from the interpretation of "render unusable."

EPA Response. The final rule clarifies that the requirement is to make the PPE "unusable as apparel." EPA agrees that access to contaminated PPE might be prevented by sealing it in a container and entrusting it to a waste disposal system that effectively prevents diversion of waste, and that such an approach would reduce pesticide exposure to the person handling the contaminated article relative to many methods of rendering the PPE unusable. EPA has included in the final rule a provision allowing the PPE to be "made unavailable for further use" as an alternative to the proposed requirement to render the contaminated PPE unusable. To reduce the potential exposure to a person handling contaminated PPE, the final rule requires that a person must wear gloves while handling PPE covered by 40 CFR 170.507(d)(2).

EPA disagrees with comments from farm bureaus suggesting that there is little likelihood of persons accessing contaminated PPE. As mentioned in the preamble to the proposed rulemaking, state pesticide regulatory agencies have raised concerns for the potential reuse of contaminated PPE to EPA. EPA relies on state pesticide regulatory agencies to raise issues with implementation of the existing WPS that arise when they conduct inspections of WPS establishments. EPA has chosen to amend the existing rule in response to the input provided by the States.

4. Costs and benefits. EPA has estimated that the cost of rendering the PPE unusable or unavailable is negligible. Although the benefits cannot be quantified, contact with contaminated PPE may result in significant exposure, especially if worn repeatedly. The negligible cost of this requirement compared to the benefit from ensuring that contaminated PPE cannot continue to cause exposure is reasonable.

XVI. Decision Not To Require Monitoring of Handler Exposure to Cholinesterase-Inhibiting Pesticides

A. Current Rule and Proposal

The existing WPS does not have a requirement to monitor cholinesterase (ChE) levels in workers or handlers. In the proposal, EPA invited comment on whether to require routine ChE monitoring of handlers. However, because EPA's initial judgement was that the benefits of routine ChE monitoring would not justify the cost, EPA did not propose to add a requirement for routine monitoring of ChE inhibition in handlers.

B. Final Rule

The final rule does not include a requirement for routine ChE monitoring for handlers.

C. Comments and Responses

Comments. In response to the proposal, several grower organizations, state farm bureaus, crop consultants and their organizations, and states and their organizations expressed support for EPA's decision not to require a mandatory routine ChE monitoring program as part of the WPS. Several commenters stated that the most effective approach to prevent handler exposure to any pesticide product is to address the potential for exposure in advance of use, rather than after exposure has taken place. Many of these commenters agreed with EPA's assessment in the proposal that EPA's worker risk assessments and mitigation measures are sufficient to provide the necessary protection from pesticide exposure during handling. One commenter also suggested that requiring ChE monitoring may add to confusion and provide a false sense of safety to workers, health care providers, and regulators because it only measures exposure. These commenters suggested that the best approach that can be taken to mitigate exposure would be to address it through product-specific risk assessments supporting the registration of pesticide products, robust handler training on specific pesticides, and effective enforcement of label requirements.

In addition, some of the commenters objected that ChE monitoring is an invasive process, and that routine ChE monitoring would be extremely time-consuming and costly and would provide information of questionable value. One commenter stated that a proper ChE monitoring program would require that a baseline be established for employees, and that it would be highly unlikely that a baseline could be obtained for many workers because of previous exposure to organophosphate insecticides, while another commenter suggested that exposure to other common materials can change the levels of ChE, especially in serum level measurements, making it difficult to establish a baseline. Another commenter added that the timing of meals, stress, physical activity, and changes in body mass can cause ChE levels to fluctuate within an individual, and that the baseline value should be taken on the day of handling a ChE-inhibiting pesticide prior to exposure due to this intra-individual variability. The commenter suggested that baselines established every 1 to 2 years, as currently recommended by Washington State and California, respectively, would not provide meaningful information concerning the degree of exposure due to these daily fluctuations.

Conversely, several commenters, including some members of Congress, the California Department of Public Health, Washington State's Department of Health and Department of Labor and Industries, several public health organizations, academics, and farmworker advocacy organizations supported the idea of adopting a routine ChE monitoring program as part of this rulemaking, particularly for handlers who use ChE-inhibiting pesticides like organophosphates and N-methyl-carbamate pesticides. Many of these commenters cited the existing ChE monitoring programs in California and Washington State in their arguments for why ChE monitoring should be expanded nationally.

Some commenters stated that California and Washington have longstanding medical monitoring programs with proven track records in reducing exposure to, and illnesses from, highly neurotoxic chemicals. These commenters stated that the successful implementation of these monitoring programs has helped health professionals understand the effects of these classes of pesticides and prevent poisoning by identifying overexposure. Two commenters stated that Washington's program is effective and protects workers as reflected by worksite field evaluations of action level ChE depressions, which have identified multiple pesticide WPS violations that are believed to contribute to worker exposure. A couple of commenters stated that the benefits realized by the state programs, which would expand nationally if monitoring were to be required, include:

- Greater certainty about the frequency of pesticide overexposure.

• Avoidance of serious pesticide illness.
• Improved compliance with the WPS.
• Identification of any existing PPE, work practice, and engineering control requirements that are not sufficient to protect pesticide handlers from exposure.
• Greater awareness of chemical and exposure hazards.

Some commenters cited Washington State's data that shows that the percentage of overexposed participating handlers who required remedial action fell from 20% when the program started in 2004 to 6% in 2013, for a reduction of 70%. These commenters stated that Washington's Department of Labor and Industries found that ChE monitoring helped identify the causes of overexposure, which allowed for those causes to be corrected by alerting employers and handlers to unsafe work practices, conditions, or equipment. Additionally, a couple of commenters stated that the percentages of handlers who actually reached the removal level from handling ChE-inhibiting pesticides remained consistently low after the implementation of the ChE monitoring program, with the percentages being 3.8% in 2004, 0% in 2010 and 2011, 2.3% in 2012, and 4% in 2013. These commenters believed that the sharp decline in the number of handlers needing remedial action, along with the consistently low percentage of handlers who exceeded 20% below their baseline (*i.e.*, those who reach the evaluation level in the state programs), shows that the program has been effective in reducing exposure to OPs and carbamates, and that monitoring should be implemented nationally so that all workers receive similar benefits.

Some commenters in support of requiring ChE monitoring also discussed the costs associated with ChE monitoring. They stated that the cost of implementation should not deter EPA from requiring medical monitoring on a national level. A few commenters stated that EPA's estimate that the cost of ChE monitoring would average $53 per year per agricultural establishment was a small cost when contrasted with the 70% reduction in overexposure according to Washington State's data. A couple of commenters also stated that monitoring in California and Washington has led to substantially fewer pesticide poisonings and reduced use of these highly toxic pesticides, and can, in turn, reduce long-term medical costs to farmworkers and the agricultural economy. Some commenters stated that EPA's analysis did not include an estimation of the medical expenses that were saved, the lost wages prevented, and the pesticide-related illnesses avoided as a result of early detection and intervention. As a result, the commenters believed that the benefits of a national ChE monitoring program would more than justify the costs given the severe effects of overexposure to ChE-inhibiting pesticides.

Other commenters supporting ChE monitoring stated that employees who handle ChE-inhibiting chemicals in non-agricultural sectors routinely receive the protection of medical monitoring. For example, some commenters stated that OSHA requires medical monitoring for workers who handle a wide range of toxic substances. They also stated that USDA requires monitoring of its employees who may be exposed to organophosphate or carbamate pesticides. These commenters stated that these safeguards should be provided for all workers who handle these pesticides, and therefore should be included in the final rule.

EPA Response. After reviewing the comments, EPA continues to believe that the expected benefits of a routine ChE monitoring program for handlers are not sufficient to justify the costs. As stated in the proposed rule, EPA believes that Washington State's efforts have identified the primary reasons for ChE inhibition among pesticide handlers. In many cases, ChE depression was caused by handlers not following basic safety and hygiene procedures, *e.g.*, not wearing the label-required PPE and failing to wash before meals or bathroom breaks. Additionally, several handlers who did wear respirators as required by labeling had beards, which compromised the seal between the face and the respirator and reduced the protection intended to be afforded by the PPE. EPA believes that requiring expanded and more frequent handler training, in combination with requirements for fit testing and training on proper respirator use for handlers, addresses the primary reasons for overexposure to ChE-inhibiting pesticides.

The revised labeling with increased protections and new mitigation measures resulting from the reregistration of organophosphates and carbamates will also result in lowered handler exposure. Reregistration has resulted in some uses of the most acutely toxic organophosphates being phased out. For the remaining uses, EPA has imposed additional PPE requirements, requirements for closed-system mixing and loading, and reductions to rates of application and number of annual applications permitted. As labels with updated PPE requirements for handlers are seen and followed in the field, EPA expects to see reduced numbers of overexposures. Additionally, the organophosphates and carbamates that are still registered are being used less frequently and being replaced by pesticides with lower risks, also reducing the potential for overexposure.

While EPA estimated the costs of a national, routine ChE monitoring program to be at least $15.2 million annually, or about $53 per agricultural establishment per year and $120 per commercial pesticide handling establishment per year, this estimate does not include the full costs that would be expected of a national ChE monitoring program. As stated in the proposed rule, a national, routine ChE monitoring program would likely include program components such as training, recordkeeping, clinical testing, and field investigations, which were not included in the estimated costs because the initial $15.2 million estimate appeared by itself to be disproportionately high in comparison to the expected benefits. Additionally, the estimated costs do not include the states' costs to build infrastructure to support ChE monitoring or to cover continued laboratory costs such as equipment maintenance and administrative support. If EPA were to calculate these additional costs, the estimated costs would be much higher than $15.2 million annually. Therefore, EPA stands by its assessment in the proposed rule that the cost of implementing a national, routine ChE monitoring program is not justified by its limited benefits.

EPA believes that the increased handler protections being finalized in this rulemaking, combined with the product-specific risk mitigation measures, will appropriately address the elevated potential for ChE inhibition in handlers. Moreover, the training and PPE elements of the final rule will have the combined effect of providing important protective benefits to all pesticide handlers through increased knowledge of exposure risks and prevention strategies. This approach will lead to a reduction of pesticide exposures because it prevents handler exposure before it occurs.

D. Costs and Benefits

Since EPA is not requiring routine ChE monitoring, there are no costs associated with this decision.

XVII. Exemptions and Exceptions

A. Immediate Family

1. Current rule and proposal. The WPS currently exempts the owners of agricultural establishments from requirements to provide certain WPS protections to themselves and their immediate family members. Owners are required to comply with all applicable provisions of the WPS for any worker or handler employed on the establishment who is not a member of the owner's immediate family. The definition of "immediate family" in the existing rule includes only the owner's spouse, children, stepchildren, foster children, parents, stepparents, foster parents, brothers, and sisters. EPA proposed to expand the definition of "immediate family" to add father-in-law, mother-in-law, sons-in-law, daughters-in-law, grandparents, grandchildren, brothers-in-law, and sisters-in-law.

Note, too, that the existing WPS definitions of workers and handlers depend upon them being employed for compensation. Therefore, any person performing worker or handler tasks who does not receive a wage, salary or other compensation is not a worker or handler protected by the WPS, regardless of familial relationship to the owner.

EPA requested comment on but did not propose changes narrowing the immediate family exemption in two ways: (1) Limiting it only to those immediate family members of an owner of an agricultural establishment who are at least 16 years old, and (2) eliminating the exemptions from requirements regarding emergency assistance for workers and handlers and regarding handler monitoring during fumigant application.

As part of the proposal to establish a minimum age for pesticide handlers and early-entry workers, EPA proposed to add an exemption from the minimum age requirements to the immediate family exemption.

2. Final rule. EPA has finalized the definition of "immediate family" as limited to the owner's spouse, parents, stepparents, foster parents, father-in-law, mother-in-law, children, stepchildren, foster children, sons-in-law, daughters-in-law, grandparents, grandchildren, brothers, sisters, brothers-in-law, sisters-in-law, aunts, uncles, nieces, nephews, and first cousins. "First cousin" means the child of a parent's sibling, *i.e.*, the child of an aunt or uncle. The final regulatory text for this definition is available at 40 CFR 170.305.

EPA has amended the exemption from certain provisions of the WPS for owners and members of their immediate families to include exemptions from the minimum age requirements for handlers and early-entry workers. The final regulatory text for this exemption is available at 40 CFR 170.601(a)(1)(i) and 170.601(a)(1)(xii).

EPA has clarified the final regulatory text related to the exemption from certain provisions of the WPS for owners and members of their immediate families. The exemption in the final rule will apply to owners and members of their immediate family on any agricultural establishment where a majority of the establishment is owned by one or more members of the same immediate family. The final regulatory text for this exemption is available at 40 CFR 170.601(a)(1).

EPA has not included in the final rule any of the other changes to the owner and immediate family exemption considered in the proposal.

3. Comments and responses.

Comments. Most of the commenters expressed general support for the proposed expansion to the definition of immediate family and the inclusion of an exemption from the minimum age requirement. Some commenters asserted that the definition provides greater clarity about who qualifies under the immediate family exemption and will assist both the regulated community and state regulatory agencies in ensuring compliance with the proposed rule.

A few commenters requested that EPA expand the definition to include cousins. Many commenters, including the Small Business Administration's Office of Advocacy, requested that EPA expand the definition further to include aunts, uncles, nieces, nephews, and cousins. Commenters requesting further expansion of the definition noted that an expansion of the family members considered immediate family under the WPS would better reflect the reality of the family farm in America. Commenters also requested that EPA further expand the definition and exemption to recognize varying ownership patterns used to assure the continued operation of the farm and the involvement of siblings and their heirs. One commenter suggested that EPA align the exemption with USDA's interpretation of farm ownership by family members, which considers a "family farm" to be one where a majority of the farm is owned by family members, rather than retaining EPA's interpretation of the exemption as applying only on establishments that are wholly owned by one or more members of the same immediate family.

A few commenters requested that EPA delete the definition of immediate family and eliminate the exemption. These commenters noted that risks from pesticide exposure are the same for family and non-family members, so all persons need the same level of protection regardless of their familial relationship to the owner.

EPA Response. EPA has further expanded the definition of immediate family to also include aunts, uncles, nieces, nephews, and first cousins (*i.e.*, child of a parent's sibling, child of an aunt or uncle) and is retaining the exemption in the WPS. EPA believes that the proposed definition of "immediate family" represents an appropriate accommodation to the social costs of the WPS to farm owners and members of their immediate families relative to FIFRA's requirement to prevent unreasonable adverse effects.

EPA considered commenters' requests to expand the definition of "immediate family." Commenters suggested that a definition that includes cousins, or cousins, aunts, uncles, nieces and nephews would better reflect the actual patterns of family-based farm ownership in the United States. EPA agrees with commenters' suggestions that family-based farm ownership may extend beyond relationships covered by EPA's existing or proposed definition. EPA agrees with commenters' requests to expand the definition to include aunts, uncles, nieces, nephews, and first cousins. For clarity, EPA has chosen to define "first cousin" as the child of a parent's sibling, *i.e.*, the child of an aunt or uncle.

EPA has clarified the applicability of the exemption in the final rule in response to comments. The exemption in the final rule applies to the owners and their immediate family members on any agricultural establishment where a majority of the establishment is owned by one or more members of the same immediate family. A "majority of the establishment" means that more than 50 percent of the equity in the establishment is owned by one or more members of the same immediate family as defined in the WPS.

EPA agrees that the risks associated with pesticide exposure do not vary based on a person's relationship to the owner of the establishment. However, EPA recognizes that family-owned farms need flexibility and expects that those family members working on an establishment covered by the immediate family exception would be adequately prepared and supervised by family members. Although owners and their immediate family members are exempted from certain provisions of the WPS (*e.g.*, providing pesticide safety training and specific decontamination supplies for immediate family

members), they are obligated to follow the pesticide labeling and other WPS provisions that are established to protect workers and handlers from risks associated with specific pesticides. For these reasons, EPA has chosen not to eliminate the definition of immediate family or the exemption from certain portions of the rule for the establishment owner and members of his or her immediate family.

Although owners of establishments and members of their immediate family are exempt from some of the provisions of the rule, EPA expects that they will voluntarily follow the provisions from which they are exempt, or achieve equivalent risk mitigations through other means. EPA encourages owners and family members to carefully study the WPS requirements and assure themselves that they are not placing each other at risk of unreasonable adverse effects.

4. Costs and benefits. EPA estimates changing the definition of immediate family and adding to the existing exemptions for owners and members of their immediate family an exemption from the minimum age requirements would not substantially change the cost of the final rule.

B. Crop Advisors and Employees

1. Current rule and proposal. The existing rule exempts employers from complying with certain handler requirements when the employee performs crop advising tasks in a treated area under an REI and is a certified or licensed crop advisor or directly supervised by a certified or licensed crop advisor. A certified or licensed crop advisor is one who has fulfilled the requirements of a program acknowledged as appropriate in writing by EPA or a state or tribal agency responsible for pesticide enforcement. The existing rule allows a certified or licensed crop advisor to make specific determinations regarding the appropriate PPE, decontamination and safe method of conduct for those working under his or her direct supervision. A person employed by a commercial pesticide handling establishment performing crop advising tasks after expiration of an REI is not subject to any provisions of the WPS. The rule also exempts employers from complying with worker requirements such as providing decontamination supplies and emergency assistance for certified or licensed crop advisors and for persons they directly supervise.

EPA proposed to eliminate the exemptions for employees directly supervised by certified or licensed crop advisors. EPA also proposed to eliminate the exemption from the worker decontamination and emergency assistance provisions for certified or licensed crop advisors employed as workers on agricultural establishments.

2. Final Rule. EPA has eliminated both exemptions as proposed. However, EPA has included in the final rule added flexibility in the PPE requirements for crop advisors and their employees. Specifically, EPA has added language to the final regulation that allows crop advisors and their employees who perform crop advising tasks while an REI is in effect to substitute the label-required handler PPE with either the label-required PPE for early-entry activities or a standard set of crop advisor PPE. The standard set of PPE for crop advising tasks included in the final rule consists of coveralls, shoes plus socks, chemical-resistant gloves made of any waterproof material and eye protection if the labeling of the pesticide product applied requires protective eyewear for handlers. The final regulatory text for this requirement is available at 40 CFR 170.601(b) and 170.607(g).

3. Comments and responses.

Comments. In response to the proposal, crop consultant associations, several states and other commenters objected to eliminating the exemption currently in place for employees working under the direct supervision of a certified or licensed crop advisor. They asserted that certified and licensed crop advisors often exceed the minimum safety training requirements when educating their employees and those employees are aware of the risks associated with their work. Some crop consultant associations and other commenters noted that they are not aware of any case of endangerment or harm that has occurred to any employee under the direct supervision of a certified or licensed crop advisor.

The crop advisor associations also expressed concern that EPA underestimated the economic impact to crop advisors, and in turn to farmers, of eliminating this exemption, citing specifically the increased costs of additional PPE, the cost of work done by certified or licensed crop advisors instead of by their employees, and the cost of increased management time. Crop consultant associations and other commenters contended that these increased costs could discourage investment in integrated pest management (IPM) and result in increased pesticide use that might put workers at increased risk of pesticide exposure. Several states supported EPA's proposal to eliminate the crop advisor exemption.

EPA Response. After consideration of the comments submitted, EPA has concluded that the burdens associated with eliminating the exemption for employees of crop advisors are justified by the additional protections provided to workers performing crop advising tasks who are not certified or licensed crop advisors. EPA has retained the exemption to the WPS for certified or licensed crop advisors because these individuals are highly trained about pesticide risks and how to protect themselves. EPA eliminated the exemption for crop advisors' employees because pest scouting tasks may result in substantial contact with a pesticide on treated surfaces in pesticide-treated areas. The amount of contact with pesticides during scouting depends on variables such as the height and density of the crop, the nature of the activity, the surface that contains the pesticide residue, and whether residues are dry or wet. While EPA recognizes that the crop consulting industry has implemented a training program for employees, the program is not required and can vary in content and quality from employer to employer. Additionally, crop scouts and assistant crop advisors are generally entry-level employees who may not feel empowered to ask an employer for PPE or other protections and may not understand the complex factors influencing risk well enough to take appropriate protective measures for themselves.

Incident monitoring programs do not capture illness data specifically associated with crop advising tasks because cases are categorized under a general "field worker" label. However, EPA's risk assessments indicate that people doing crop advising tasks during an REI are at risk of chronic, low-level pesticide exposure over time. PPE requirements and availability of decontamination supplies during and after an REI are fundamental to mitigating risks of concern for workers. Allowing workers who are supervised by certified or licensed crop advisors to conduct crop advising tasks without the same basic protections provided for other workers would establish a lesser standard of protection for similar types of work. EPA understands that IPM programs require post-application entry and the timing is critical to efficacy. By retaining the exemption for certified or licensed crop advisors to conduct crop advising tasks during an REI and allowing flexibility for employers to substitute the label required PPE for handlers with either PPE for early-entry workers or a standard set of PPE, the

increased costs noted in comments are reduced.

4. Costs and Benefits. EPA estimates the cost of amending the exemption for crop advisors would be negligible. EPA finds that the incremental cost of employers providing decontamination supplies and PPE for crop advisor employees are reasonable compared to the cost. EPA is allowing flexibility in the choice of PPE for crop advisor employees who must enter treated areas under an REI to accommodate entry into multiple fields with the same attire. Benefits from reduced exposure to pesticides as a result of requiring the standard protections for all workers, including those supervised by certified or licensed crop advisors, are reasonable when compared to their cost.

C. Closed Systems

1. Current rule and proposal. The existing WPS permits exceptions to the label-specified PPE when using a closed system for certain pesticide handling activities. The existing rule does not adequately describe the specific characteristics of an acceptable closed system. EPA proposed to establish specific design criteria and operating standards for closed systems based on California's existing standards in the 1998 *Closed Systems Director's Memo* (*http://www.cdpr.ca.gov/docs/whs/cac/cacwhs98-01.pdf*).

2. Final Rule. EPA has modified the proposed approach regarding closed systems. Specifically, in the final rule EPA has adopted a broad definition, a performance-based standard, and basic operating standards. The operating standards require the handler employer to ensure that written operating instructions for the closed system are available, that the handler receives training on use of the closed system, and that the system is maintained according to the written instructions. Specific design criteria and recordkeeping requirements that EPA proposed are not included in the final rule.

The final rule retains the existing requirements for PPE when a closed system is used: Labeling-mandated PPE must be immediately available for use in an emergency and handlers must use protective eyewear for closed systems that operate under pressure.

The final regulatory text for the definition of closed systems is available at 40 CFR 170.305. The final regulatory text for the closed system exception is available at 40 CFR 170.607(d)(3).

3. Comments and responses.

Comments. Most comments that addressed closed systems supported the goal of encouraging their use as an engineering control through a WPS exception; however, very few individuals, states or organizations supported the proposal as written. Several farmworker advocacy organizations and public health organizations suggested that EPA require closed systems for all Toxicity Category I pesticide products rather than continuing the voluntary system. Comments from states and grower and industry associations supported the existing voluntary, performance-based system and objected to the proposed specific design criteria, noting a number of weaknesses in the criteria. Specifically, they noted that the pressure requirements were too prescriptive and would not allow effective mixing, that the proposal did not address water soluble packaging or lock and load systems used for dry formulations, and that the complicated requirements would be a deterrent to increased adoption of closed systems. A number of commenters also noted that the design standards are too restrictive to accommodate future innovation. States commented that assessing compliance with the design standard would require extensive inspector training and could result in technical violations without providing additional handler protection.

EPA Response. EPA considered the comments submitted and was convinced that the prescriptive requirements in the proposal would be a disincentive to the voluntary adoption of closed systems. In response, EPA has finalized a closed system performance standard that will permit flexibility for the system while meeting the protection goals.

In response to comments advocating that EPA require closed systems for all Toxicity Category I pesticides under the rulemaking, EPA reminds the commenters that worker risk assessments and the risk management processes establish the required protections that appear on product labels. EPA identifies the basic protections, often PPE, to protect handlers from risks of concern. If handler exposure during mixing and loading is above the established level of concern, and if PPE does not reduce exposure to below the level of concern, the pesticide label may require a closed system for mixing and loading. EPA has required the use of closed systems on some product labeling.

EPA recognizes that the reduction in handler PPE alone is not likely to be enough incentive for an employer to use closed systems. However, EPA is convinced that on larger establishments, the efficiency and comparative protection value of a closed system, combined with the reduction in PPE that must be worn by the handler, may induce users to adopt closed systems. Establishing requirements for such closed systems—whether required or used voluntarily—is necessary to protect handlers, who could be exposed to concentrated pesticides if they use poorly designed or constructed closed systems.

EPA agrees with the comments that a broad definition of "closed system" will encourage industry innovation better than the proposed prescriptive rule and will allow flexibility for employers to design systems specific to their needs. A broad performance standard, along with requirements concerning operating instructions, training and maintenance, will enable employers, handlers and regulatory personnel to determine whether a closed system qualifies for the exemption. The operating standards will ensure that the closed systems are used as intended and are adequately maintained.

EPA notes that the California Department of Pesticide Regulation (CDPR) no longer supports use of the prescriptive-based criteria upon which EPA modeled the proposal outlined in the NRPM. In December 2014, CDPR published proposed regulations outlining a simplified, performance-based criteria for closed system design. California is the only state with specific closed system standards, and has required their use with certain chemicals since the 1970s. CDPR developed their revised closed systems standard and discussed the proposal with representatives from groups that will be directly affected including agricultural producer organizations, manufacturers, applicators, and growers, as well as at CDPR's Pesticide Registration and Evaluation Committee and the Agricultural Pest Control Advisory Committee and Pest Management Advisory Committee meetings. EPA considered CDPR's proposed rule in the development of the final closed systems standard. EPA's final closed system requirements were developed using CDPR's proposal as a model and do not conflict with CDPR's proposed closed system requirements.

Section 170.607(d)(2)(i) establishes a performance standard for closed systems. Specifically, a closed system must remove the pesticide from its original container and transfer the pesticide product through connecting hoses, pipes and couplings that are sufficiently tight to prevent exposure of handlers to the pesticide product, except for the negligible escape associated with normal operation of the

system. This closed system performance standard is based on the criteria for closed systems in section 6746(f)(1) of CDPR's proposed regulations with a few changes, partly to accommodate the different terminology in the two sets of regulations. Also, EPA adjusted the requirement to apply to transferring any pesticide product rather than a pesticide concentrate so the WPS criterion would apply to transferring liquid formulations and dry formulations whereas California's proposed requirements would only apply to liquid formulations. Lastly, EPA added the phrase "except for the negligible escape associated with normal operation of the system" to provide the flexibility intended in the proposed rule. The existing WPS describes a closed system as preventing the pesticide from contacting handlers or other persons, which is a very high standard because it does not allow any exposure. The phrase "except for the negligible escape associated with normal operation of the system" is intended to account for the expected or predictable small release of pesticides from existing closed systems when hoses, pipes and couplings are disconnected. EPA recognizes that there will often be a small amount of material in the hoses, pipes and couplings to which the handler possibly could be exposed. EPA has not quantified the maximum amount of pesticide escape that is acceptable, but notes that it should be consistent with the intent of a closed system, which is to prevent contact to the handlers or other persons.

EPA also adjusted the final regulatory text for closed systems to address the comments about water soluble packaging. The regulatory text in the final rule was revised to state clearly that the closed system exception from PPE applies when intact, sealed water soluble packaging is loaded into a mixing tank or system. The regulation also clarifies that water soluble packaging is no longer a closed system if the integrity of the packaging is compromised. This language in the final rule incorporates EPA's current position about water soluble packaging and closed systems, as established in the Interpretive Guidance on the WPS: *http://www.epa.gov/pesticides/safety/workers/wpsinterpolicy.htm.*

While the final rule includes only a performance standard, EPA recognizes that it may be helpful to have guidance on how to construct a system to meet that standard. As part of California's proposed rulemaking, CDPR and the University of California, Davis (UC Davis) developed plans for building a closed system to release along with the proposal. The "Overview of Closed Systems Components and User Designs" document includes lists of component parts (and costs) for three levels of systems (basic, medium and high). The design plans developed by CDPR and UC Davis will provide users with examples of representative closed systems components so they can identify or develop acceptable closed systems.

4. Costs and benefits. EPA estimates the cost of the final closed system requirements will be $2.1 million annually. EPA estimates that cost per agricultural establishment will range from $5–$30 per year, and the cost per commercial pesticide handling establishment will be about $21 per year. EPA estimates that on family establishments, the cost would range from $1–$30 per year. Many commenters from the pesticide industry and grower associations stated that EPA underestimated the costs of closed systems in the proposed rule partly because existing closed systems would need to be upgraded to meet the proposed standards. The changes to replace the proposed specific design standards with a broad performance standard in the final rule address these comments, because employers will be able to continue using most existing closed systems with minimal adjustments. For details refer to the Economic Analysis accompanying this rule (Ref. 1). In addition, EPA notes that the WPS does not require use of closed systems, so commenters who assumed many pesticide users would have to purchase expensive closed systems were incorrect.

EPA adjusted the closed system cost estimates from the proposed rule in several ways to reflect changes in the final rule. The cost estimate in the proposed rule assumed that some users of closed systems would purchase new systems while others would revert to using PPE. In light of the revised definition, the final cost estimate assumes that most users would simply purchase an adapter to connect their existing closed system to the pesticide container, which is the part that most likely needs to be added to convert existing mechanical transfer systems to be closed systems that meet EPA's criteria. These changes and costs are based on the CDPR and UC Davis document "Overview of Closed Systems Components and User Designs," which includes lists of component parts and their costs for three levels of systems. In addition, the cost of developing operating instructions was added, assuming that most closed systems are custom-made systems that would require the employer to develop operating instructions, while the costs of keeping records of maintenance was deleted. EPA reduced the estimated number of farms using closed systems based on information from the Agricultural Handler Exposure Task Force, which showed that the limited number of pesticide users who use closed systems are primarily larger establishments and commercial pesticide handling establishments. Therefore, the estimated costs of the closed system criteria decreased from the proposed rule to the final rule.

Using closed systems is preferred to wearing PPE as an approach for managing chemical exposure in the "hierarchy of controls" established under standard industrial hygiene principles. Enclosing the chemical and substantially reducing the potential for exposure at the source reduces the potential for subsequent exposure to handlers, other people, and the environment.

D. Aerial Applications—Eyewear Protection for Open Cockpits

1. Current rule and proposal. Under the existing WPS, where labeling requires eye protection, the requirement may be satisfied by goggles, safety glasses with front, brow and temple protection, or a full face respirator. The existing WPS allows aerial applicators applying pesticides from open cockpit aircraft to substitute a visor for label-required eye protection. Because the term "visor" can be used to refer to the brim of a cap that provides only shade and offers little eye protection from pesticide sprays, EPA proposed to clarify the requirement by removing the term. EPA proposed to allow aerial applicators to substitute for the label-required eyewear a helmet with the face shield lowered, because this more clearly indicates EPA's expectation of a clear visor that covers and adequately protects the eyes.

2. Final rule. In the final rule, EPA has removed the term "visor." The final rule allows the substitution of a helmet with face shield lowered for labeled protective eyewear for aerial applicators in aircraft with open cockpits. The final regulatory text for this requirement is available at 40 CFR 170.607(f)(2).

3. Comments and responses.

Comments. There were very few comments addressing this proposal. One state suggested EPA consult with relevant aerial agencies responsible for overseeing the use of open cockpits for making pesticide applications to see if the proposal is feasible.

An aerial applicators association asserted that aerial applications of pesticides using open cockpit aircraft

are very rare and that EPA is solving a problem that does not exist. They objected to handlers operating open cockpit aircraft being required to wear the same PPE as handlers operating open cab ground equipment. They did not highlight any specific issue with the helmet and visor being lowered when protective eyewear are required.

EPA Response. EPA acknowledges that while open cockpit aircraft may be rare, available exposure data indicate that even pilots in enclosed cab aircraft are exposed to the pesticides they apply. Ensuring that the eye is protected from pesticides is required by the product labeling. Helmets with face shields in the lowered position provide acceptable eye protection, but many items referred to as "visors" offer no eye protection from pesticide sprays.

4. Costs and benefits. This provision does not represent a substantive change to the existing rule. EPA expects the cost to aerial applicators to be negligible.

E. Aerial Applications—Use of Gloves

1. Current rule and proposal. In the existing rule, aerial applicators have the option of whether to wear chemical resistant gloves to enter and exit the aircraft unless gloves are required by the product labeling. In the proposal, EPA inadvertently inserted the regulatory language that existed prior to the 2004 rule revision that required pilots to wear chemical resistant gloves.

2. Final rule. The final rule retains the exception in the existing WPS that offers aerial applicators the option of wearing chemical-resistant gloves when entering and exiting the aircraft, except when the product labeling requires that chemical-resistant gloves be worn when entering and exiting the aircraft. The final regulatory text for this requirement is available at 40 CFR 170.607(f)(1).

3. Comments and responses.

Comments. Many applicators and their associations and pesticide manufacturers noted this error. The commenters also asserted the use of gloves presents a hazard to pilots who may fall when entering and exiting the aircraft when wearing gloves. They also suggested contamination from contact with the exterior of the aircraft is minimized due to advances in application techniques (*e.g.*, GPS) that help pilots avoid flying through their spray.

EPA Response. The final rule retains the exception in the existing regulation that offers aerial applicators the option of wearing chemical-resistant gloves when entering and exiting the aircraft, except when the product labeling requires that chemical resistant gloves be worn entering and exiting the aircraft.

4. Costs and benefits. There is no cost associated with including the existing exception in the final regulation.

F. Enclosed Cabs—Changes to Exceptions to PPE Requirements When Applying Pesticides From Inside an Enclosed Cab

1. Current rule and proposal. The existing WPS permits exceptions to the labeling-specified PPE when handling tasks are performed from inside an enclosed cab that meets the specifications defined in the rule based on the dermal protection provided by the enclosed cab, which prevents pesticides from contacting the body. The existing rule also permits persons occupying an enclosed cab to forego certain labeling-required respiratory protection if the cab has been certified by the manufacturer to provide respiratory protection equivalent to the handler respiratory protection required by the pesticide labeling.

EPA proposed to eliminate the requirement for any labeling-specified respiratory protection PPE when applying pesticides from inside an enclosed cab. This would have allowed handlers to substitute a long-sleeved shirt, long pants, shoes, and socks for the labeling-specified PPE in all cases no matter what type of respiratory protection PPE was required by the labeling.

2. Final Rule. In the final rule, EPA requires handlers in enclosed cabs to wear the labeling-specified respiratory protection except when the only labeling-specified respiratory protection is a filtering facepiece respirator (NIOSH approval number prefix TC–84A) or dust/mist filtering respirator. In the final rule, handlers in enclosed cabs may substitute a long-sleeved shirt, long pants, shoes and socks for the labeling-specified PPE for skin and eye protection. If a filtering facepiece respirator (NIOSH approval number prefix TC–84A) or dust/mist filtering respirator is required by the pesticide product labeling for applicators, then handlers do not need to wear the respirator inside the enclosed cab if the enclosed cab has a properly functioning air ventilation system that is used and maintained in accordance with the manufacturer's written operating instructions. If any other type of respirator is required by the pesticide labeling for applicators, then the handler must wear the respirator inside the enclosed cab during handling activities.

EPA has retained other exceptions to PPE requirements for handlers using enclosed cabs. Specifically, all of the PPE required by the pesticide product labeling for applicators must be immediately available to handlers in an enclosed cab and be stored in a sealed container to prevent contamination. Handlers must wear the applicator PPE if they exit the cab within a treated area during application or when a REI is in effect. Once PPE has been worn in a treated area, handlers must remove it before reentering the cab to prevent contamination of the cab.

The final regulatory text for the enclosed cab exception is available at 40 CFR 170.607(e).

3. Comments and responses.

Comments. EPA did not receive any comments in opposition to the proposed changes to the enclosed cab exception. One grower noted that the enclosed cab exception is an excellent component of the proposal. Another commenter noted that respirator use is infrequent since the spraying operation takes place from inside an enclosed, climate-controlled tractor cab.

EPA Response. EPA considered the comments submitted and is convinced that the enclosed cab exception should be retained since it provides an important option to reduce potential pesticide exposure through engineering controls rather than PPE, and such cabs can be an important tool for addressing heat stress issues for handlers. Although EPA considered a more expansive exception under its proposal, after reevaluation of the potential exposure risks for handlers and the protections afforded by enclosed cabs, EPA determined that enclosed cabs may not universally provide respiratory protection necessary to mitigate inhalation risks for any pesticide product that required respiratory protection greater than a filtering facepiece respirator (NIOSH approval number prefix TC–84A) or dust/mist filtering respirator. EPA determined that enclosed cabs may not provide adequate protection from inhalation exposure hazards when the inhalation exposure risk arises from vapors or other non-particulate inhalation hazards. Additionally, EPA has learned that there are no longer any enclosed cab manufacturers certifying cabs to provide respiratory protection and the American Society of Agricultural and Biological Engineers has withdrawn their enclosed cab standard. Based on this information, EPA has removed provisions under the enclosed cab exception that permit persons occupying an enclosed cab to eliminate certain labeling-required respiratory protection PPE if the cab has been certified by the manufacturer to provide respiratory protection

equivalent to the respiratory protection required by the pesticide labeling.

4. Costs and benefits. EPA does not estimate that the change to the exception to PPE requirements for handlers using a tractor with an enclosed cab to apply pesticides will have a significant cost. Handlers will benefit by using adequate respiratory protection when applying pesticides from an enclosed cab.

XVIII. General Revisions

A. Label vs. Labeling

1. Current rule and proposal. FIFRA defines the label as "the written, printed, or graphic matter on, or attached to, the pesticide or device or any of its containers or wrappers." 7 U.S.C. 136(p)(1) For reasons of space and user convenience, detailed use instructions and precautions often appear in labeling provided with the pesticide product upon sale. As defined in FIFRA, "labeling" includes "all labels and all other written, printed, or graphic matter accompanying the pesticide or device at any time; or to which reference is made on the label or in literature accompanying the pesticide or device . . ." 7 U.S.C. 136(p)(2).

Labeling may include booklets distributed with the product when such documentation is too long to be included on the label that is securely attached to the container. For example, some products have labeling that is 60 or more pages long. FIFRA and EPA regulations require certain information to appear on the label—on or attached to the pesticide container. Other information necessary to use the product safely, such as directions for use, may be included in a booklet distributed with, but not securely attached to, the container (40 CFR 156.10(i)(1)(ii)); this information could also be available on the Internet if the producer has decided to provide web-distributed labeling for the product (Ref. 21). In either format, the information would be considered labeling. Labeling sometimes includes enforceable references to other documents that do not physically accompany the container, such as the WPS.

The existing rule discusses employers' responsibilities related to pesticide labels and labeling in several places. The existing rule requires agricultural and handler employers to ensure that pesticides are used in a manner consistent with the labeling. When the emergency assistance provisions of the WPS are triggered, the existing rule requires employers to provide information from the product labeling to affected workers, handlers, and/or treating medical personnel. Handlers must receive training on the format and meaning of information contained on pesticide labels and in labeling. Finally, employers must ensure that handlers have either read or have been informed in a manner they understand of all labeling requirements related to safe use of the pesticide, and that the handler has access to the product labeling during handling activities.

Although the proposal reorganized the rule, some of the requirements for the existing rule outlined in the previous paragraph remained essentially unchanged in the proposed rule, *e.g.*, agricultural and handler employers' responsibility to ensure that pesticides are used in a manner consistent with the labeling. The proposal included a requirement for employers to maintain copies of the pesticide labeling for each pesticide used on the establishment for 2 years from the date of application. The proposal also would have required the employer to provide a copy of the label and the product's SDS when the emergency assistance provisions are triggered, rather than to provide information from the pesticide labeling.

2. Final rule. Where the proposed rule would have required the employer to provide a copy of the pesticide label, or specific information from the labeling, and the SDS under the emergency assistance provisions, the final rule only requires the employer to provide the SDS and specific information, which can be obtained from the pesticide application and hazard information display, rather than the label or labeling. See Unit XIV. for other comments, EPA's responses and the final regulatory text related to emergency assistance. The final rule eliminates the proposed requirement for employers to maintain copies of the labeling, rather than the label, for each product bearing a WPS requirement on the labeling, and replaces it with a requirement for the employer to retain specific information about the product used and the application, as well as the SDS. See Unit VII. for other comments, EPA's responses and the final regulatory text related to this requirement.

For handler training requirements, EPA has amended the language in the final rule to delete the word "all" related to labeling. The final rule requires handlers to receive training on following *the portions of the labeling applicable to the safe use of the pesticide* and on the format and meaning of *information contained on pesticide labels and in labeling applicable to the safe use of the pesticide.* The final regulatory text for these provisions is available at 40 CFR 170.501(c)(3)(iii)–(iv).

For labeling and application-specific information the employer must provide to the handler, EPA has amended the final rule to require the employer to provide the handler with information on all *portions of the labeling applicable to the safe use of the pesticide,* rather than on all labeling requirements. The final regulatory text for this provision is available at 40 CFR 170.503(a).

3. Comments and responses.

Comments. Commenters raised issues with EPA's use of the term "labeling" in the proposed rule. Commenters raised specific concerns with the use of the broader "labeling" in various requirements instead of limiting those requirements to just the label. These concerns arose in regard to agricultural and commercial pesticide handler employer duties, emergency assistance, hazard communication, and handler training and establishment-specific information.

Some commenters generally disagreed with EPA's use of "labeling" and requested that EPA use "label" instead throughout the rule. They asserted that labeling is too broad and that labeling includes materials not attached to the container, such as advertisements, brochures and pamphlets. Commenters assert that the broadness of "labeling" applied to requirements to provide or retain this information could result in a requirement on employers to track down many ancillary pieces of information for a complete record, or to face a technical violation for failure to retain all elements of the labeling.

Under the agricultural and commercial pesticide handler employer duties, at 40 CFR 170.9(a) and 170.13(a) of the proposal, commenters said that EPA's use of labeling was too broad. They asserted that employers' liability should be only to comply with the WPS rather than with the label or all relevant labeling because making the employer responsible for complying with all labeling exceeds the scope and intent of the WPS. They also noted that certified applicators, those competent to use pesticides according to the labeling instructions and who make the actual applications, should be required to comply with the labeling, but that the agricultural employer should not.

In regard to emergency assistance, commenters requested that EPA delete the reference to labeling and replace it with a requirement to provide the label and EPA registration number of the product. Commenters note that this requirement would be sufficient to provide appropriate information for emergencies.

Commenters also requested that in the section on pesticide application and hazard information, EPA delete the requirement for the employer to maintain copies of the labeling for all WPS-labeled pesticides used on the establishment, and instead to require the employer to maintain a copy of the label and EPA-registration number. Again, commenters noted that such a requirement would likely result in technical violations without providing benefit to workers or handlers.

In the sections on handler training and establishment-specific information, commenters took issue with requirements to train handlers on all labeling and to ensure that for specific applications handlers have read the labeling or have been informed of all labeling requirements. Commenters noted that a requirement for handlers to be trained on all labeling requirements, rather than those pertinent to their specific tasks, would be overly broad and unnecessary. Commenters requested that EPA replace "labeling" with "label" in these sections.

EPA Response. EPA disagrees with commenters' request to replace "labeling" with "label" throughout the regulation because the broader term is appropriate in many provisions of the WPS. The FIFRA scheme for managing the risks of pesticide products rests primarily on mandatory use directions and precautionary statements approved by EPA in the registration process and communicated to users through labels and labeling. Although in the case of lower risk products intended for general consumer use, this information typically fits on the label, this is not the case for many agricultural and commercial-use pesticides.

Labeling does not include advertisements, pamphlets or brochures unless they accompany the product when sold or are referenced on the labeling. For instance, EPA has indicated that documents such as marketing brochures used to sell the product and to provide information to customers and is not labeling as defined by FIFRA section 2(p). (*http://www.epa.gov/pesticides/regulating/labels/labels_faq/lr_faq_10.html*) If a document of this type does not accompany the product when sold and there is no reference to the bulletin on the product label, it is not "labeling." Note though, that non-labeling documentation related to a product must not have claims that differ from the product label. 7 U.S.C. 136j(a)(1)(B).

Because mandatory use directions often appear in the labeling of agricultural pesticides, rather than the label, some provisions of the WPS appropriately use the word "labeling." Where the word "labeling" appears in the WPS, employers are responsible for following or providing labeling as defined in FIFRA. This does not require employers to find, retain, or provide advertisements, pamphlets or marketing brochures that do not meet the definition of "labeling."

For example, it is appropriate that agricultural and handler employers' duties under the final rule include ensuring compliance with "labeling" rather than just the label. The existing regulation has the same requirement under general duties and prohibited actions. 40 CFR 170.7(a)(2). The labeling may include directions for use or other information essential to the safe and effective application of the pesticide, or specific information related to WPS protections, such as the REI. For these reasons, EPA has decided not to replace "labeling" with "label" throughout the final rule as suggested by the commenters.

Furthermore, the obligation of certified applicators (or any other person legally applying a pesticide) to follow the labeling does not negate the obligation of agricultural and handler employers to comply with the labeling. Requirements related to the WPS are found both in the regulation (*e.g.*, training, application-specific information) and on specific product labeling (*e.g.*, directions for use, REI, PPE). In addition, other non-WPS elements of the labeling, such as application rates and maximum number of applications to a crop, are relevant to protecting workers and handlers from occupational exposure to pesticides. When employers choose to use a pesticide that references the WPS on the labeling on their establishment (either as the applicator or by directing another person to apply the pesticide on their behalf), they are obligated to ensure that all requirements of the labeling are followed, not only those related to the WPS, to ensure that workers and handlers are adequately protected.

However, EPA agrees that certain WPS requirements could be limited to the information on the label or specific information from the label, and has specified "label" instead of "labeling" or specific information from the label where appropriate. For example, EPA agrees with commenters that employers need not provide all labeling in the event of the emergency. In the current rule, EPA lists specific information that must be provided to a potentially injured worker or handler, or to treating medical personnel: Product name, EPA registration number, active ingredients, antidote, and first aid and medical treatment information. Since all of this information is required on the label (40 CFR 156.10(a)(1)), the final rule allows the employer to provide a copy of the label or this specific information from the label, in addition to providing a copy of the SDS, when emergency assistance is required.

EPA also agrees with commenters' request to eliminate the requirement for employers to maintain copies of the labeling for all pesticides with a WPS reference statement used on the establishment. EPA agrees that if workers, handlers, or other persons need information on a specific product that was used on the establishment, such information can be obtained using the EPA registration number and product name. In response to comments received, EPA has replaced the proposal with a requirement for the employer to retain only the EPA registration number, active ingredient(s), product name, and other application-specific information for such products, in addition to the SDS.

Similarly, EPA agrees that requiring handler employers to ensure that handlers have been trained generally on, and for specific applications have read or been informed of all labeling requirements may be unnecessary if they are only using a product for a single type of application. The labeling could include directions for use covering multiple application methods and multiple crop sites, which may be of no relevance to a particular handler. Although the final rule continues to refer to "labeling" in this context, it now requires employers to ensure that for specific applications, handlers have read the portions of the labeling applicable to the safe use of the pesticide or have been informed in a manner they understand of all portions of the labeling applicable to the safe use of the pesticide. Further, EPA has amended handler training to require that handlers are instructed on their duty to follow the portions of the labeling applicable to the safe use of the pesticide, and on the format and meaning of information contained on pesticide labels and in labeling.

4. Costs and benefits. Where requirements related to labeling have imposed a cost, *e.g.*, the requirement for the employer to retain product labeling, the cost is discussed in the Unit related to the overall requirement. EPA does not estimate any additional costs with these requirements.

B. Regulating Other Persons

1. Current rule and proposal. Some provisions in the existing WPS provide protections to persons other than

workers and handlers ("other persons"). For example, an existing requirement on the label and in § 170.210(a) specifies that the applicator must apply the pesticide in a way that will not contact workers or other persons. The existing requirement for entry-restricted areas on nurseries in § 170.110 specifies that an agricultural employer must not allow or direct any person, other than an appropriately trained and equipped handler, to enter or remain in the restricted area. The existing immediate family exemption in § 170.104(a)(2) states that the owner of the agricultural establishment must provide protections to other workers and other persons who are not part of his immediate family. The description of closed systems in § 170.240(d)(4) of the existing rule describes closed systems as systems that enclose the pesticide to prevent it from contacting handlers or other persons. Also, the scope and purpose in § 170.1 of the existing rule explains that the WPS is intended, in part, to reduce the risks of illness or injury resulting from the accidental exposure of workers and other persons to pesticides.

The proposed rule included these same protections for persons other than workers and handlers and added several additional provisions that would affect "other persons." The proposed requirement for a handler to cease or suspend application if a worker or other person is in the treated area or entry-restricted area was intended to supplement the existing "do not contact" requirements, which already protect persons other than workers or handlers. In addition, EPA proposed to include "other persons involved in the use of a pesticide to which this part applies" in the proposed anti-retaliation provision in § 170.15.

2. Final rule. The final rule includes the protections and references to "other persons" that were proposed, except that EPA removed the reference to other persons from the definition of closed systems. The final rule's prohibition against "other persons involved in the use of a pesticide" retaliating against workers or handlers in § 170.315 of the final rule is consistent with OSHA's non-retaliation provision. The other sections that provide protections to other persons continue existing requirements or supplement existing requirements and are discussed in detail in Unit IX. and Unit XVII.C.

3. Comments and responses.

Comments. Some grower organizations, states and their organizations, a retailer organization, and a commercial applicator opposed including protections for "other persons" in the WPS. These commenters argued that the proposal would extend the WPS to persons not currently covered and would result in an unwarranted expansion of scope beyond workers, handlers and employee/employer relationships. The grower, retailer and applicator commenters stated that including "other persons" could create the potential for frivolous legal challenges by anti-chemical activists seeking to prevent pesticide applications.

EPA Response. EPA disagrees with the comments on including protections for "other persons" in the WPS. EPA already protects "other persons" in addition to workers and handlers in the existing WPS. EPA notes that anti-chemical activists are not using the current protections to prevent pesticide applications and the final rule does not appear significantly more likely to be used in that manner.

4. Costs and benefits. The final rule generally continues or supplements existing protections so there are no incremental costs or benefits to the protections for other persons.

C. Definitions

1. General

i. Current rule and proposal. The existing WPS provides definitions for certain terms for use in the rule. In addition to the specific definitions for the twenty terms listed in 40 CFR 170.3, the WPS defines the terms "closed system," "enclosed cab," "entry-restricted area," "personal protective equipment," and "use" in other sections of the rule where those terms are used. EPA proposed to revise certain existing definitions to provide greater clarity, to add several new definitions for terms used in the rule, including definitions for the terms that had previously been defined elsewhere, and to eliminate two unnecessary existing definitions for "greenhouse" and "forest."

ii. Final rule. In the final rule, EPA has adopted the revisions to the definitions as proposed except for the definitions of the terms "agricultural establishment," "agricultural plant," "authorized representative," "closed system," "commercial pesticide handler employer," "commercial production," "employ," "enclosed space production," "entry-restricted area," "farm," "forest operation," "hand labor," "immediate family," "labor contractor" "outdoor production," "nursery," and "use." In the final rule, EPA has deleted the definitions for the terms "greenhouse" and "forest" as proposed. EPA has also deleted the existing definitions for the terms "farm," "forest operation," and "nursery," as well as the proposed definition for "commercial production." Additionally, in the final rule EPA has added a new definition for the term "application exclusion zone." The discussions of the existing definitions and proposal, final rule, comments and EPA response for these terms are contained in Units XVIII.C.2—XVIII.C.8. The final regulatory text for these definitions is available at 40 CFR 170.305.

iii. Comments and responses.

Comments. EPA received comments on the proposed definitions of the terms "authorized representative," "closed system," "enclosed space production," "entry-restricted area," "hand labor," "immediate family," "outdoor production," and "use". EPA did not receive any substantive comments opposed to the other proposed revisions related to definitions. EPA received several general comments from state, grower and agricultural producer associations that supported developing improved definitions because it would reduce the likelihood of alternative interpretations, while improving compliance and enforceability. Many farmworker advocacy organizations and public health organizations also supported EPA's proposed revisions to improve definitions, commenting that it is important to have clear and understandable language in order to avoid ambiguity.

During USDA's FIFRA section 25 review of the final rule, USDA commented that the definition for "agricultural plant" depends on the definition for "commercial production," and the definition for "commercial production" depends on the definition for "agricultural plant" (Ref. 15). USDA said similar issues exist in the definitions of "agricultural establishment" and "farm," "forest operation," and "nursery." USDA recommended resolving these circular dependencies. USDA also commented that the proposed definitions of "employ," "labor contractor," and "commercial pesticide handler employer" contained problematic language that could confusion as to who is ultimately responsible for providing the handler protections in Subpart F of the proposed rule.

EPA Response. EPA agrees that improved definitions will reduce the likelihood of ambiguity and alternative interpretations, while improving compliance and enforceability. EPA believes these proposed revisions to the definitions adopt more widely used and commonly accepted "plain English" language, and will add clarity and consistency to the rule. The proposed revisions to the definitions will also

help address regulatory or policy issues with the existing rule raised by state regulatory partners and other program stakeholders.

In response to comments from USDA made during their FIFRA section 25 review of the final WPS rule, EPA agrees that the definitions for "agricultural plant" and "commercial production," and the definitions for "agricultural establishment" and "farm," "forest operation," and "nursery" are circular (Ref. 15). While EPA is not convinced that serious confusion would result, EPA has eliminated some definitions and revised others to address USDA's concern. The terms "commercial production," "farm," "nursery," and "forest operation" appear only in the definition section and are not used elsewhere in the regulation. Accordingly, EPA has deleted these definitions and merged their substantive content into the definitions of "agricultural establishment" and "agricultural plant." EPA also agrees that the current definitions of labor contractor and commercial pesticide handler employer contain some problematic language that could result in potential confusion and/or conflict regarding agricultural employer and commercial pesticide handler employer duties under the rule. In the final rule, EPA has adopted revised definitions for "employ," "labor contractor," and "commercial pesticide handler employer" to address the potential confusion that could result from conflicting language in the existing proposed definitions. EPA believes the revised regulatory text clarifies that CPHEs are responsible for the handlers they employ and agricultural employers would no longer be considered employers of CPHE handlers for the purposes of the WPS, without overlooking the fact that some handlers are hired by agricultural employers through labor contractors and not CPHEs. A copy of USDA's comments and EPA's responses is available in the docket for this rulemaking. (Ref. 15).

iv. Costs and benefits. EPA estimates the proposed changes to the definitions will not substantially change the cost of the final rule.

2. Authorized Representative. i. Current rule and proposal. The existing WPS does not contain a definition for "authorized representative." EPA proposed to add the term "authorized representative" to the rule and defined it as "a person designated by the worker or handler, orally or in writing, to request and obtain any information that the employer is required to provide upon request to the worker or handler."

ii. Final rule. The rule finalizes the proposed definition with changes. EPA has retitled the term "authorized representative" to "designated representative" to better describe the relationship between the representative and the worker or handler, and the definition narrows the information that is required to be provided by the employer to the designated representative. In the final rule, "designated representative" means "any persons designated in writing by a worker or handler to exercise a right of access on behalf of the worker or handler to request and obtain a copy of the pesticide application and hazard information required by § 170.309(h) in accordance with § 170.311(b) of this part."

iii. Comments and responses.

Comments. EPA received many comments from states, growers, agricultural associations and pesticide manufacturer associations objecting to the definition of "authorized representative." Most commenters objected to the proposed requirement for employers to make certain pesticide information available to an "authorized representative" of their workers or handlers rather than the actual definition of authorized representative. Several farm bureau commenters and grower groups stated that oral designation of the representative could result in abuse, and would be unenforceable. One comment from a farmworker advocacy organization stated that EPA should keep the definition for authorized representative and clarify the range of representatives that could legitimately be asked to receive information on behalf of a worker or handler (*e.g.*, medical care provider, legal advocate, family member, etc.).

EPA Response. EPA has been convinced by comments that designation of the representative must be in written form to protect employers from fraudulent claims. A written request that identifies the worker or handler can be verified against employment records, and information about the dates of their employ can be used to narrow the information needed to be provided. The final rule requires employers to respond to written requests.

EPA disagrees with the recommendation to limit the definition to certain persons that could be asked to request the information on behalf of the worker or handler. EPA believes that specifying classes of persons permitted to serve as designated representative would unnecessarily limit worker and handler access to needed information. The final rule requires employers to respond to such requests within 15 days. However, to ensure that medical personnel treating a worker or handler have timely access to information necessary for purposes of diagnosis or treatment, EPA has included a separate requirement for employers to promptly provide the information to treating medical personnel or those working under their direction, at 170.311(b)(8).

iv. Costs and benefits. EPA estimates that including the definition of authorized representative will not change the cost of the final rule. Costs associated with the requirement for employers to respond to written requests for pesticide application and hazard information are included in the discussion in Unit VII.A.

3. Closed System. i. Current rule and proposal. The existing WPS defines the term "closed system" as "a system that encloses the pesticide to prevent it from contacting handlers or other persons." EPA proposed to move the definition of closed system to the definition section of the rule and to redefine a closed system as "a system for mixing or loading pesticides that encloses the pesticide during removal of the pesticide from its original container and transfer, mixing, or loading of the pesticide product, mixtures or dilutions, and any rinse solution, if applicable, into a new container or application equipment, in such a manner that prevents the pesticide and any pesticide mixture or use dilution from contacting handlers or other persons before, during and after the transfer, except for negligible release associated with normal operation of the system."

ii. Final rule. In the final rule, EPA has defined "closed system" as "an engineering control used to protect handlers from pesticide exposure hazards when mixing and loading pesticides." The final regulatory text for this definition is available at 40 CFR 170.305.

iii. Comments and responses.

Comments. EPA did not receive any specific comments on the definition of closed system. However, EPA received a number of comments related to EPA's proposal on closed systems that indicated the proposed requirements may be too prescriptive or limiting, could eliminate desired flexibility for growers, and could discourage innovation and the adoption of closed systems.

EPA Response. EPA agreed with the comments that the proposed requirements related to closed systems may be too prescriptive or limiting, could eliminate desired flexibility for growers, and could discourage

innovation and the adoption of closed systems. Although the comments did not specifically mention the closed system definition, EPA reconsidered the proposed definition of closed system in light of the overall comments on closed system requirements. EPA believes that a broader definition of "closed system" will encourage industry innovation better than the proposed prescriptive definition, and will retain flexibility for handler employers to design systems specific to their needs. In the final rule, EPA has adopted a new definition of closed system that more accurately defines the nature and intent of a closed system without inadvertently prescribing specific requirements and operational components for such closed systems.

iv. Costs and benefits. EPA estimates that revising the definition of closed system will not change the cost of the final rule.

4. Enclosed space production and outdoor production. i. Current rule and proposal. The existing WPS does not contain definitions for the terms "enclosed space production" or "outdoor production." Instead, the existing WPS defines the term "greenhouse" to describe the type of WPS-covered agricultural establishments that produce agricultural plants inside enclosed structures. The existing rule uses the terms "farm," "forest" and "nursery" for WPS-covered agricultural establishments that produce agricultural plants outdoors. Greenhouse is defined in the existing WPS as "any operation engaged in the production of agricultural plants inside any structure or space that is enclosed with nonporous covering and that is of sufficient size to permit worker entry. This term includes, but is not limited to, polyhouses, mushroom houses, rhubarb houses, and similar structures. It does not include such structures as malls, atriums, conservatories, arboretums, or office buildings where agricultural plants are present primarily for aesthetic or climatic modification." EPA proposed to delete the definition of "greenhouse" because it would no longer be necessary as a result of the proposed addition of a new definition for "enclosed space production." EPA proposed to define enclosed space production as "production of an agricultural plant in a structure or space that is covered in whole or in part and that is large enough to permit a person to enter." EPA also proposed to add a new definition for the term "outdoor production" and defined it as "production of an agricultural plant in an outside open space or area that is not enclosed or covered in any way."

ii. Final rule. In the final rule, EPA has deleted the definition of the term "greenhouse" as proposed, and has adopted the definitions for "enclosed space production" and "outdoor production" with modifications. The final rule defines "enclosed space production" as "production of an agricultural plant indoors or in a structure or space that is covered in whole or in part by any nonporous covering and that is large enough to permit a person to enter," and defines "outdoor production" as "production of an agricultural plant in an outside area that is not enclosed or covered in any way that would obstruct the natural air flow." The final regulatory text for these definitions is available at 40 CFR 170.305.

iii. Comments and responses.

Comments. EPA received several comments from states and their organizations opposing the definition of "enclosed space production" as written. A few other commenters also expressed concerns with the definition of "outdoor production." A state association noted that the proposed definition could greatly expand areas covered under certain entry restrictions to include any covered area such as fields or groves with shade covers and/or screen houses. The commenter expressed concerns that entry restrictions currently applicable to greenhouses would be extended to these establishments, and is not aware of any need for such an extension of these restrictions. States generally echoed these comments. One state requested clarification of whether the term "spaces covered in part" includes structures such as "hoop houses," and another state noted that the proposed rule did not define or reference high tunnels and requested clarification of whether "high tunnels" are considered a greenhouse for the purposes of WPS (*i.e.,* would "high tunnels" be considered a type of enclosed space production?). One state commented that the proposed definition expands areas covered under certain entry restrictions to include shade houses and screen houses and this would have a major impact in on the state's nursery industry. Another state also expressed concerns that the proposed definition of enclosed space production would expand restrictions beyond greenhouses, and suggested that EPA add the phase "where the production of agricultural plants for research or commercial purposes occurs" to the definitions of enclosed space production and outdoor production so that only those operations engaged in the production of agricultural plants for commercial purposes would be covered by the WPS. Another state commented that the term "outdoor production" is too broad and by misinterpretation, could encompass a number of non-farm activities.

During USDA's FIFRA section 25 review of the final rule, USDA commented that the inclusion of the term "natural forest" in the definition of "outdoor production" creates confusion since there is no explanation of what the term "natural forest" means and therefore the term is not needed (Ref. 15).

EPA Response. EPA considered the comments submitted and agrees with the comments that said the proposed definition of "enclosed space production" could expand areas covered under certain entry restrictions to include any covered area such as fields or groves with porous shade covers and/or screen houses where such restrictions are not necessary. EPA noted the potential impact of the proposed definition on the nursery industry as raised by commenters. EPA also agrees that the proposed definition of "outdoor production" could lead to some outdoor production being considered enclosed space production because of the phrase "that is not enclosed or covered in any way." EPA is convinced that the definition of enclosed space production and outdoor production should be revised so that operations that use non-porous coverings in their plant production operations, such as screen houses and shade houses, are not covered by the entry restrictions deemed necessary for the protection of workers and handlers that are working with pesticides or in pesticide treated areas in enclosed space production operations. Therefore, EPA revised the definitions of enclosed space production and outdoor production to clarify that enclosed space production only includes areas covered in whole or in part "by any nonporous covering," rather than "any covering" as in the proposed definition; and that outdoor production will include areas that are covered only with coverings that are sufficiently porous that they do not obstruct the natural air flow typical of open fields or forests. It is intended that these definitions of enclosed space production and outdoor production be complementary, such that all production agriculture is either enclosed space production or outdoor production.

EPA does not agree with the request to add the phrase "where the production of agricultural plants for research or commercial purposes occurs" to the definitions of enclosed space production and outdoor

production so that only those operations engaged in the production of agricultural plants for commercial purposes would be covered by the WPS. EPA believes other definitions and language in the rule already clearly limit the scope of the WPS to establishments where the production of agricultural plants for research or commercial purposes occurs, so the addition of such language to these definitions would be redundant and would not serve to further limit the scope of the rule in any way not already accomplished through other means.

Some commenters requested clarification of whether structures such as "hoop houses," and "high tunnels" are considered a type of enclosed space production. The term "greenhouse" in the WPS has resulted in enforcement problems, because of the extreme variability in the types of structures that might be considered greenhouses. This problem is compounded when considering the many greenhouse-type structures (*e.g.,* polyhouses, mushroom houses, hoop houses, high tunnels and similar structures) that have come into use. This is why EPA has replaced the term greenhouse with enclosed space production. EPA believes the new terms correspond more accurately to the nature of the risk that EPA is concerned about mitigating (*i.e.,* use of pesticides in enclosed spaces that could affect pesticide inhalation exposure potential). Therefore, if a structure or space is covered in whole or in part by any nonporous covering and is large enough to permit a person to enter, then the structure or space would fall under the definition of enclosed space production in the final rule. EPA anticipates that most greenhouses, hoop houses, high tunnels and similar structures will fall within the definition of enclosed space production, but a final determination will be made on a case-by-case basis applying the parameters of the definition to each situation.

EPA agrees with USDA that the inclusion of the term "natural forest" in the definition of "outdoor production" creates confusion and is not needed. In response, EPA has revised the final definition of outdoor production accordingly (Ref. 15).

iv. Costs and benefits. EPA estimates adding and changing the definition of enclosed space production and outdoor production will not substantially change the cost of the final rule.

5. Entry-restricted area and application exclusion zone. i. Current rule and proposal. The existing WPS does not contain a definition for the terms "entry-restricted area" or "application exclusion zone." Under the existing rule, the term "entry-restricted area" is used to refer to areas on an establishment from which workers and other persons must be excluded during, and/or immediately after, an ongoing pesticide application to protect the workers or other persons from being contacted by the pesticide (either directly or through drift). EPA proposed to define the term "entry-restricted area" as "the area from which workers or other persons must be excluded during and after the pesticide application."

ii. Final rule. In the final rule, EPA has added the term "application exclusion zone" instead of the proposed term "entry-restricted area." EPA has defined the term "application exclusion zone" as "the area surrounding the application equipment which must be free of all persons, other than appropriately trained and equipped handlers, during pesticide applications." The final regulatory text for this definition is available at 40 CFR 170.305.

iii. Comments and responses.

Comments. EPA received several comments from states regarding the term "entry-restricted area." One commenter said the term was linguistically awkward and said EPA should instead use the term "restricted area buffer."

EPA Response. EPA considered the comments submitted and agrees with the comments that the term "entry-restricted area" was not clear and would be likely to cause confusion. In the final rule, EPA has eliminated the use of that term and has therefore deleted the proposed definition. The final rule adopts the term "application exclusion zone" to refer to the area from which persons must be excluded during applications. See Unit IX. for EPA's response to the comments on the WPS requirements related to entry-restricted areas.

iv. Costs and benefits. EPA estimates that not including the proposed definition of the term "entry-restricted area" in the final rule and adding the new definition for "application exclusion zone" will not substantially change the cost of the final rule.

6. Hand labor. i. Current rule and proposal. The existing WPS defines hand labor as "any agricultural activity performed by hand or with hand tools that causes a worker to have substantial contact with surfaces (such as plants, plant parts, or soil) that may contain pesticide residues. These activities include, but are not limited to, harvesting, detasseling, thinning, weeding, topping, planting, sucker removal, pruning, disbudding, roguing, and packing produce into containers in the field. Hand labor does not include operating, moving, or repairing irrigation or watering equipment or performing the tasks of crop advisors." In the proposal, EPA intended to revise the definition by deleting the following sentence from the existing definition, "These activities include, but are not limited to, harvesting, detasseling, thinning, weeding, topping, planting, sucker removal, pruning, disbudding, roguing, and packing produce into containers in the field." In the proposed regulatory text for the definition of term "hand labor," EPA inadvertently deleted the phrase "except that hand labor does not include operating, moving, or repairing irrigation or watering equipment or performing crop advisor tasks" from the end of the definition. The erroneously proposed definition for the term "hand labor" was "any agricultural activity performed by hand or with hand tools that cause a worker to have substantial contact with plants, plant parts, or soil and other surfaces that may contain pesticide residues."

ii. Final rule. EPA has corrected the unintentional omission from the proposed definition of "hand labor." The final rule defines "hand labor" as "any agricultural activity performed by hand or with hand tools that cause a worker to have substantial contact with plants, plant parts, or soil and other surfaces that may contain pesticide residues, except that hand labor does not include operating, moving, or repairing irrigation or watering equipment or performing crop advisor tasks." The final regulatory text for this definition is available at 40 CFR 170.305 for the final regulatory language for definitions.

iii. Comments and responses.

Comments. One commenter objected to the proposed change to the definition of hand labor that deleted the phrase "except that hand labor does not include operating, moving, or repairing irrigation or watering equipment or performing crop advisor tasks" from the end of the definition. The commenter indicated that removing this exception from the definition of hand labor would make the irrigation exception for early entry unworkable and would disrupt irrigation operations.

EPA Response. EPA agrees with the comment on the definition of "hand labor." In the final, rule EPA has deleted the sentence listing hand labor activities as proposed, but has retained the clause excluding "operating, moving, or repairing irrigation or watering equipment or performing crop advisor

tasks" from being considered hand labor tasks.

iv. Costs and benefits. EPA estimates that revising the definition of hand labor will not change the cost of the final rule.

7. Immediate Family. See Unit XVII.A. for a complete discussion of EPA's consideration of the definition of "immediate family" in conjunction with the exemption from certain provisions of the WPS for owners and members of their immediate families.

8. Use. i. Existing definitions and proposal. The existing WPS provides a definition of the term "use" (as in "to use any registered pesticide in a manner inconsistent with its labeling") for the purposes of the rule at 40 CFR 170.9, "Violations of this part." For the purposes of the WPS, EPA has interpreted the term "use" to cover a broad range of pesticide-related activities that are listed at 40 CFR 170.9. EPA proposed to move the existing definition for "use" found at 40 CFR 170.9 into the definitions section of the rule.

ii. Final rule. In the final rule, EPA has adopted the definition for "use" as proposed. The final regulatory text for this definition is available at 40 CFR 170.305.

iii. Comments and responses.

Comments. EPA received several comments from states, growers, agricultural associations and pesticide manufacturer associations objecting to the proposed definition of "use." Most commenters objected to the definition of use because they did not support inclusion of "arranging for application of the pesticide" as part of the definition of "use." Some commenters said they believed that this language would greatly expand the scope of the WPS and would be unreasonable and unnecessary. Some commenters noted that they could not see how "arranging for application of the pesticide" could be considered use. During its review of the draft final rule under FIFRA section 25(a), USDA noted that the term "arranging for the application of the pesticide" as part of the definition of the term "use" could lead to persons that call on or answer the telephone and "arrange" for pest management by scheduling the appointment on behalf of another to be covered by the rule and possibly have WPS responsibilities.

EPA Response. EPA disagrees with comments that say the proposed definition for the term "use" could or will expand the scope of the WPS because this interpretation has been in the WPS since the rule first became effective. Moreover, EPA has not been made aware of any instances where this interpretation of "use" has resulted in an unreasonable or inappropriate outcome. EPA believes that "arranging for application of the pesticide" is appropriately part of the definition of "use" for the purposes of the WPS because in production agriculture, the individual who physically "uses" a pesticide almost always does so at the direction of another person who has substantially greater control over the circumstances of the use. Thus the WPS is designed so that when an agricultural or handler employer arranges for the application of a pesticide by a handler employee, it triggers certain WPS duties that are properly the responsibility of the agricultural or handler employer. For instance, once the agricultural employer arranges for a pesticide application by a commercial pesticide handling establishment, the commercial pesticide handler employer must provide the agricultural employer with certain information about the intended application before the application takes place (so the employer will be able to fulfill WPS notification requirements and protect workers during application, etc.). In such circumstances, it is reasonable and appropriate that the handler employer should be held responsible for the pre-application information exchange even though the application has not commenced and even though the handler employer personally never physically "uses" the pesticide.

EPA interprets "arranging for application of the pesticide" as used in § 170.9(a) and § 170.305 as a means of assuring that the entities (generally the agricultural employer or handler employer) with the most authority and control over WPS compliance would be legally responsible for WPS compliance. EPA does not interpret "arranging for application of the pesticide" as making subordinate persons who merely perform the clerical functions of arranging for application of the pesticide liable for WPS compliance. Therefore, since EPA has not been made aware of any instances where the existing interpretation of the term use has resulted in any problems for growers, states or the agricultural industry, EPA has moved the definition for the term "use" into the definitions section of the rule without any change from the proposal.

iv. Costs and benefits. Moving the definition of use will not change the cost of the final rule.

D. Restructuring 40 CFR Part 170

1. Current rule and proposal. The existing WPS is organized into three subparts: "General Provisions," "Standard for Workers," and "Standard for Handlers." Content that applies to both workers and handlers is repeated creating redundancy throughout the rule.

EPA discussed renaming the regulation "Requirements for Protection of Agricultural Workers and Pesticide Handlers" in the preamble of the proposal and proposed reorganizing the rule into four subparts: "General Provisions," "Requirements for Protection of Agricultural Workers," "Requirements for Protection of Pesticide Handlers," and "Exemptions and Exceptions." EPA proposed creating the "General Provisions" subpart to describe certain obligations for agricultural employers, handler employers, and those requirements that apply to both. The proposal included subparts "Requirements for Protection of Agricultural Workers" and "Requirements for Protection of Pesticide Handlers" to provide information that supplements the general duties and obligations for employers and to outline the content of the training and decontamination supplies that the employer must provide for workers and handlers respectively. EPA proposed to consolidate most of the exceptions and exemptions into a separate subpart titled "Exemptions and Exceptions" to make them easier to find and reference.

2. Final Rule. In the final rule, EPA has retained the existing name of the regulation, "Worker Protection Standard," and has adopted the proposed restructuring of the rule with minor modifications.

EPA has determined that it is appropriate to allow one year for employers, trainers, and state and tribal regulators to prepare for the changes to the WPS. See Unit XIX. In order to allow the existing WPS to remain in effect for one year and to make available the revised regulatory language in advance of the implementation date, both the existing WPS and the revised WPS must appear in the Code of Federal Regulations. Thus the final rule provides that Subparts A, B and C of part 170 will remain in effect until one year after the effective date of this final rule. Subparts D, E, F and G of part 170 contain the full text of the revised WPS; however, these subparts will not be implemented until one year after the effective date of this final rule. Some provisions of subparts D, E, F and G, such as pesticide safety training and the pesticide information display, will not be implemented until two years after the effective date of this final rule. One year after the effective date of this final rule, subparts A, B and C will no longer be effective. At that time, EPA intends to

delete subparts A, B and C from part 170.

In addition to finalizing the proposed structuring of the rule, EPA has added a new section providing a process for allowing states and tribes to request equivalency determinations from EPA for existing state or tribal laws or regulations that may provide protections equivalent to the WPS. EPA has added this to a retitled subpart: "Exemptions, Exceptions and Equivalency."

3. Comments and responses.

Comments. EPA did not receive any comments opposed to the proposal to restructure the WPS. One commenter noted that the proposed restructuring of the rule increased the clarity of the rule and the relationship among the components. Another commenter asserted that there was no need to change the name of the regulation, and noted that if EPA was going to change the name of the rule, it should more accurately represent the full scope of the rule and the impacted establishments.

EPA Response. EPA agrees with the comment that it is unnecessary to change the name of the rule. "Worker Protection Standard" and the abbreviation WPS are commonly used and associated with the rule. Upon further consideration, EPA agrees that the existing name of the rule is very widely recognized and that it will facilitate more effective communications on the rule to retain the current name of the rule.

EPA also agrees with the commenter that the proposed restructuring of the rule increases the clarity of the rule and the relationship among the components. EPA is adopting the proposed restructuring of the WPS in the final rule with the minor modifications noted. EPA expects the revised part 170 will be easier to read and understand, thereby improving compliance by worker and handler employers.

4. Costs and benefits. EPA does not estimate any costs associated with the restructuring of the rule. The benefits of the restructuring will be increased clarity and understanding of the rule which should result in improved compliance and more consistent enforcement.

E. Equivalency Provisions

1. Current rule and proposal. The current WPS does not contain equivalency provisions that would permit EPA to potentially recognize, through a WPS-established regulatory mechanism, state or tribal worker protection laws and/or regulations that may provide equivalent or significantly greater protection in comparison to the provisions of the existing WPS, or provide equivalent protection at a significantly lower cost. EPA did not propose to add equivalency provisions to the rule because it did not receive information from states or tribes that such provisions were necessary, and had not been informed by growers that WPS requirements conflicted with existing state or tribal worker protection laws or regulations.

2. Final rule. In the final rule, EPA has included a section on equivalency because of comments received that indicate provisions may be needed to address certain issues with the WPS potentially conflicting with existing state and tribal worker protection laws or regulations. EPA recognizes that some states and tribes have existing worker protection provisions in their own laws and regulations that may be equivalent to the provisions of the existing WPS, that may provide significantly greater protection, or may provide equivalent protection at a significantly lower cost, and decided it would be more practical and efficient to establish a mechanism to evaluate specific state or tribal requirements and to make equivalency determinations rather than relying on other EPA enforcement mechanisms or policies to be able to allow such determinations. The final regulatory text for this requirement is available at 40 CFR 170.609.

3. Comments and responses.

Comments. Although EPA did not propose equivalency provisions, EPA received comments from the California Department of Pesticide Regulation (CDPR) that indicated it would be beneficial if states could be granted 'equivalency' as was done for the current WPS. The CDPR comment refers to an independent enforcement discretion decision that was granted under the current WPS to recognize CDPR's requirement for the content of their field posting sign to be equivalent to the existing requirement at 40 CFR 170.120. Comments from some other state pesticide regulatory agencies indicate there may be issues of equivalency between their regulations and the final WPS requirements. Although these commenters did not specifically raise the need for equivalency provision, they indicated a need for EPA to be aware of the issue and potentially identify solutions.

EPA Response. Based on the comments received and EPA's experience with the current WPS and requests from CDPR for equivalency on certain regulatory requirements, EPA agrees that there are potential situations where states or tribes may request EPA to consider equivalency under the WPS for their laws or regulations. Therefore, EPA believes it is prudent to consider an equivalency process under the WPS, and feels strongly that it is more efficient and advantageous to establish a mechanism for considering equivalency in the WPS rule rather than relying on other mechanisms. EPA has provided a general equivalency process in the rule that is modeled on the provisions that were developed and implemented for substantially the same reason and purpose under the pesticide containment regulations in 40 CFR 165.97. (71 FR 47330, August 16, 2006).

4. Costs and benefits. EPA does not estimate any costs associated with adding the equivalency provisions to the rule. The benefits of allowing equivalency under the provisions being included in the final rule will be that EPA will be able to more easily consider and permit equivalency for some states that have provisions in their own laws and regulations equivalent to the provisions of the WPS or that may provide significantly greater protections or equivalent protection at a lower cost.

F. Clarifications

1. Scope and Purpose. In the final rule, EPA has clarified who the rule protects and that agricultural and commercial pesticide handler employers are responsible for carrying out the requirements of the rule. EPA has also clarified that handlers have responsibilities under the rule to protect workers and other persons during pesticide applications. Refer to 40 CFR 170.301 for the revised language.

2. Applicability. In the final rule, EPA has clarified in 40 CFR 170.303(c) that users must comply with product labeling requirements where the labeling requirements differ from the rule, except as provided in 40 CFR 170.601, 170.603, and 170.607, where the WPS provides exceptions to label-required PPE and REIs.

3. Prohibited Actions. In the proposed rule EPA proposed modifications to the retaliation provisions of the rule to clarify the actions that are prohibited under the rule. In the final rule EPA has further modified the retaliation provisions based on comments provided from DOL on how EPA could improve its retaliation provisions by modeling it after language used in similar provisions in DOL regulations. Moreover, we note that this rule does not preempt the general anti-retaliation provision in the DOL-administered Occupational Safety and Health Act, 29 U.S.C. 660(c). Refer to 40 CFR 170.315 for the regulatory text.

XIX. Implementation

A. Proposal

EPA proposed to make the final rule effective 60 days after the date of publication in the **Federal Register**; however, compliance with certain provisions, including the additional content of pesticide safety training and pesticide safety information, and new signs for posting, would not be required until 2 years after the effective date of the final rule. EPA proposed the 2-year delay between effective date of the final rule and the implementation date to allow time for new training materials to be developed and made available, and to give employers, trainers, and other affected stakeholders time to make the necessary changes to their practices and operations to comply with the new training and pesticide safety information requirements. EPA also linked the implementation date for the revised pesticide safety training requirements for workers and handlers to the availability of new revised training materials that satisfy the new rule requirements. Under the proposal, if EPA announced the availability of such materials sooner than 18 months after the effective date of the final rule, then the new training requirements would go into effect 2 years after the effective date of the final rule. If EPA announced the availability of materials that comply with the requirements more than 18 months after the effective date of the final rule, then the new training requirements would not take effect until 180 days after the announcement of availability of complying training materials published in the **Federal Register**.

B. Final Rule

EPA has included in the final rule a one-year delay from the effective date of the final rule before employers must comply with any of the new WPS requirements. Thus, on January 2, 2017, employers will be required to comply with almost all of the new and revised WPS requirements. However, employers will not be required to comply with certain new WPS provisions until two years after the effective date of the final rule. This two year delay applies to the new requirements for pesticide safety training for workers and handlers, pesticide safety information and handlers to suspend applications when workers or other persons are in the application exclusion zone. As proposed, the final rule provides that compliance with certain new training requirements will not be required until the later of two years after the effective date of the final rule, or 180 days after EPA publishes in the **Federal Register** a notice of availability of new revised training materials that satisfy the new rule requirements.

The final regulatory text for these provisions is available at 40 CFR 170.2, 170.311(a)(3), 170.401(c)(3), 170.501(c)(3) and 170.505(b).

C. Comments and Responses

Comments. Most comments that addressed implementation focused on three main areas: (1) The need for better and more effective enforcement of the revised rule once the new requirements are effective; (2) the need for appropriate supporting communication, education, training and compliance assistance materials to facilitate effective implementation; and (3) the need for additional time before the final rule becomes effective to give regulators and the regulated community time to prepare for compliance with new requirements.

Many comments from states, pesticide safety educators, trainers, grower associations and pesticide manufacturer associations pointed out a need for appropriate training and compliance assistance materials to support effective implementation. Commenters indicated that it was essential for EPA to have updated communications and compliance assistance materials, such as fact sheets and the "WPS How to Comply" manual, developed and available to all affected parties in order for the regulated community to be able to learn and understand new requirements. Several states, grower associations and pesticide manufacturer associations commented that EPA should provide more time before the new rule requirements become effective so that regulators and the regulated community can more adequately prepare for compliance with new requirements. However, several farmworker advocacy organizations urged EPA to implement the proposed training requirements for workers and handlers sooner than the proposal of 2 years from the effective date of the final rule.

EPA Response. EPA considered the comments submitted and agrees that after publication of the final rule, some time is needed before the new WPS requirements are implemented. EPA understands that State, tribal and federal regulators need time to become familiar with the new regulation, provide training to pesticide inspectors, develop the capacity for enforcing the new rule requirements, establish appropriate WPS inspection and enforcement policies, and conduct outreach to the regulated and protected communities. In addition, agricultural employers will need time to become familiar with the new requirements and implement any necessary changes. In the final rule, EPA has delayed the implementation of the new WPS requirements for one year so that EPA can work with state and tribal pesticide regulators and the regulated community to better prepare for compliance with new rule requirements. The existing rule will remain in effect and be enforced during this time, as provided in 40 CFR 170.2.

EPA disagrees with comments that the compliance dates for the new worker and handler training requirements should be implemented sooner than 2 years from the effective date of the final rule as outlined in the proposal. EPA believes that up to 18 months could be needed in order to develop and disseminate new, high quality, multi-lingual worker and handler training materials in multimedia formats that comply with the new requirements. Additionally trainers will have to obtain the new training materials, become familiar with the new training content and ensure that they continue to meet any eligibility requirements to train. Therefore, EPA has decided to retain the proposed requirement to delay the new training requirements for 2 years from the effective date of the final rule (or 180 days after the announcement that training materials are available, whichever is later) to allow adequate time for development and widespread distribution of the materials to trainers and employers. While EPA agrees that it is important for workers and handlers to have the new safety training information as soon as possible, time will be needed to create and distribute new training materials and to allow existing trainers to familiarize themselves with those new materials. In order to maximize compliance with the final rule, and in the interests of consistency and efficiency, EPA intends to develop and make available suitable training materials. EPA intends to have new training materials developed and disseminated as soon as practical and will encourage employers to begin using the new materials as soon as they become available so that many workers and handlers will begin receiving the benefits of the new training before the required date.

EPA is committed to a robust outreach, communications and training effort to communicate the new rule requirements to affected WPS stakeholders. To facilitate implementation, EPA plans to issue plain language "how to comply" fact sheets and guidance materials once the

final rule is published. EPA plans to develop compliance assistance materials that are targeted to specific agricultural sectors and rule requirements such as respirator requirements or the WPS exemptions and exceptions. EPA also intends to develop and disseminate new worker and handler training materials, conduct outreach to potentially affected parties, and provide assistance and resources to States and Tribes for WPS implementation. EPA plans to hold Pesticide Regulatory Education Program courses for State and Tribal pesticide program staff that will focus on WPS implementation, and Pesticide Inspector Residential Training courses for State and Tribal pesticide inspectors that will focus on WPS inspection requirements.

D. Costs and Benefits

The discussion of the overall expected costs and benefits for implementation are discussed in Unit II.C. EPA believes that delaying the dates for compliance with the final rule for one year after the effective date will allow regulators and the regulated community to better prepare for compliance with the rule while delaying immediate costs and allowing time for employers to explore ways to minimize implementation costs.

XX. References

The following is a listing of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

1. EPA. *Economic Analysis of the Agricultural Worker Protection Standard Revisions.* Washington, DC 2015.
2. EPA. Pesticides; Agricultural Worker Protection Standard Revisions; Proposed Rule. **Federal Register** (79 FR 15444, March 19, 2014) (FRL–9395–8).
3. EPA. Final Report: *Small Business Advocacy Review Panel on EPA Planned Revisions to Two Related Rules: Worker Protection Standard for Agricultural Pesticides (RIN 2070–AJ22); and Certification of Pesticide Applicators (RIN 2070–AJ20).* November 3, 2008.
4. EPA. *Response to Comments on Proposed Changes to the Worker Protection Standard.* 2015.
5. U.S. Senate. S. Rep. No. 92–883 (Part II), 92nd Congress, 2nd Session at 43–46 (1972). U.S. Code Congressional and Administrative News 1972, p. 4063.
6. DOL. *2011–2012 NAWS data—public set. http://www.doleta.gov/agworker/naws.cfm#d-files. Retrieved April 24 2015.*
7. USDA Economic Research Service. Kandel, W. *Profile of Hired Farmworkers, A 2008 Update. Economic Research Report No. 60. U.S. Department of Agriculture. Economic Research Service.* 2008.
8. EPA. *Worker Protection Standard: A Summary of the Public's Comments and the Agency's Response.* 1992.
9. Burke, L., Hutchins, H. *"A Study of Best Practices in Training Transfer and Proposed Model of Transfer." Human Resource Development Quarterly.* Vol. 19 no. 2, Summer 2008.
10. Calvert, et al, 2008. *"Acute pesticide poisoning among agricultural workers in the United States, 1998–2005."American J Ind Med* 51, no. 12: 883–898. December 2008.
11. Kasner, et al. *"Gender differences in acute pesticide-related illnesses and injuries among farmworkers in the United States, 1998–2007. American J Ind Med* 55, no. 7: 571–583. July 2012. *http://onlinelibrary.wiley.com/doi/10.1002/ajim.22052/full. Retrieved April 24, 2015.*
12. *Lee, S–J, Mehler, L, Beckman, J, Diebolt-Brown, B, Prado, J, Lackovic, M, et al. "Acute Pesticide Illnesses Associated with Off-Target Pesticide Drift from Agricultural Applications." Environ Health Perspect* 119:1162–1169. 2011.
13. EPA. *Response to "Pesticides in the Air—Kids at Risk: Petition to Protect Children from Pesticide Drift (2009)."* 2014.
14. EPA. *Economic Analysis of the Proposed Agricultural Worker Protection Standard Revisions.* Washington, DC 2014.
15. EPA. *USDA Comments on the Draft Final Agricultural Worker Protection Standard Revision Rule and EPA Responses.* 2015.
16. EPA. Pesticides; Procedural Regulations for Registration Review; Final Rule. **Federal Register** (71 FR 45720, August 9, 2006) (FRL–8080–4).
17. OSHA. Hazard Communication; Final Rule. **Federal Register** (77 FR 17574, March 26, 2012).
18. EPA. Worker Protection Standards for Agricultural Pesticides; Proposed Rule. **Federal Register** (53 FR 25970, July 8, 1988) (FRL 3314–4).
19. OSHA. Hazard Communications Standard; Proposed Rule. **Federal Register** (53 FR 29822, August 8, 1988).
20. EPA. Worker Protection Standard; Hazard Information; Proposed Rule. **Federal Register** (57 FR 38167, August 21, 1992) (FRL–3793–1).
21. EPA. Pesticides; Final Guidance for Pesticide Registrants on Web-Distributed Labeling; Notice of Availability. **Federal Register** (79 FR 18908, April 4, 2014) (FRL–9905–60).
22. EPA. Pesticide Management and Disposal; Standards for Pesticide Containers and Containment; Final Rule. **Federal Register** (71 FR 47330, August 16, 2006) (FRL–8076–2).
23. EPA. Information Collection Request Supporting Statement: *Agricultural Worker Protection Standard Training and Notification (Final Rule).* EPA ICR No. 2491.02 and OMB Control No. 2070–0190. 2015.

XXI. 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 II.C. (Ref. 1).

B. Paperwork Reduction Act (PRA)

The information collection activities in this final rule have been submitted to OMB for approval under the PRA, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document that the EPA prepared has been assigned EPA ICR number 2491.02 and OMB Control No. 2070–0190 (Ref. 23). You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

The information collection activities related to the existing Worker Protection Standard are already approved by OMB in an ICR titled "Worker Protection Standard Training and Notification" (EPA ICR No. 1759; OMB Control No. 2070–0148). The final rule ICR addresses adjustments to the estimated number of respondents, time for activities, and wage rates related to the current regulatory requirements as approved under OMB Control No. 2070–0148. In addition, the final rule ICR addresses program changes related to the amendments, including modifications to restrictions in field entry activities during REIs; increased hazard communications; increased training (for both workers and handlers); provisions for information during emergency assistance; and recordkeeping for respirator and training requirements.

Respondents/affected entities: Agricultural establishments. The number of agricultural establishments is based on the 2012 Census of Agriculture data, special tabulation, by the USDA

National Agricultural Statistics Service (NASS). Based on that information, there are about 870,000 crop producing establishments covered by the rule.

Commercial pesticide handling establishments. Based on information from Hoover's Dun and Bradstreet, EPA estimates there are about 2,000 commercial pesticide handling establishments. Based on EPA's data on certified applicators, there are more than 40,000 commercial applicators in plant agriculture.

Agricultural workers and handlers. EPA estimates that there are about 1.9 million workers, based on the 2012 Census of Agriculture data, special tabulation, by USDA's NASS.

Respondent's obligation to respond: Mandatory (7 U.S.C. 136–136y, particularly section 136w(a)).

Estimated number of respondents: 985,000.

Frequency of response: Rule familiarization will occur annually for the first 3 years. Training of workers and handlers will occur annually. Posting of the hazard communications information will occur, on average, 20 times a year. Recordkeeping of training will occur 1.5 times per year.

Total estimated burden: 10,448,160 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $ 424,166,295 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 collection instruments. When OMB approves this ICR, the Agency will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule

C. Regulatory Flexibility Act (RFA)

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 agricultural and handler employers, and commercial pesticide handler employers. EPA expects the impacts to be less than 0.1% of the annual value of sales or revenues for the average small entity. EPA calculates the impact of the rule as the percent of sales revenue. Only the very smallest farms, with average sales of less than $10,000 per year, may face impacts above one percent of sales. The number of entities that may be impacted in excess of one percent of sales could be about 12,000 farms, nurseries, and greenhouses or about 6% of all small farms impacted by the WPS with revenues less than $10,000 per year. However, this is likely an overestimate of the number of farms impacted as it does not account for the nearly 2,000 such farms in California that would face impacts well below the national average. Additionally, there are nearly 23,000 such farms that produce only oil crops or forage whose employees are not likely to engage in hand labor activities and would not be covered by worker requirements. Please refer to the Economic Assessment, Table 5.4–3. "Small Business Impacts, WPS Farms making pesticide applications" for further details of the assessment.

Although EPA was not required by the RFA to convene a Small Business Advocacy Review (SBAR) Panel because this rule would not have a significant economic impact on a substantial number of small entities, EPA 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. 3).

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. 1531–1538, and does not significantly or uniquely affect small governments. The rule requirements would primarily affect agricultural employers and handler employers. The total estimated annualized cost of the final rule is $60.2—66.9 million.

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, because states provide enforcement for pesticide laws. EPA solicited and received comments from state partners on the proposed revisions, which are addressed in this final rule preamble and the response to comments document.

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). The proposed rule would not regulate tribal governments directly; agricultural employers and pesticide handler employers are the directly affected entities. Thus, Executive Order 13175 does not apply to this action.

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

This final 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 rule may have a disproportionate effect on children. As such, EPA considered the best available science in order to protect children against environmental health risks and this final rule is consistent with EPA's 1995 Policy on Evaluating Health Risks to Children (*http://www2.epa.gov/sites/production/files/2014-/documents/1995_childrens_health_policy_statement.pdf*), reaffirmed in 2013 (*http://www2.epa.gov/sites/production/files/2014-05/documents/reaffirmation_memorandum.pdf*).

Protections include improved training on reducing pesticide residues brought from treated areas to the home on workers and handlers' clothing and bodies and establishing a minimum age of 18 for handlers and early entry workers. With regard to establishing an age restriction, while studies have not demonstrated a clear cut off point at which adolescents are fully developed, literature indicates that their development may continue until they reach their early to mid-20s. Additionally, research has shown that adolescents may take more risks, be less aware of the potential consequences of their actions on themselves and others, and be less likely to protect themselves from known risks. All of this information supports establishing a minimum age to allow those handling pesticides to develop more fully before putting themselves, others, and the environment at risk, and to allow those performing early-entry activities to develop more fully in order to adequately protect themselves from the risks of entering a treated area while an REI is in effect. The final rule will reduce the potential for misuse by

adolescent handlers who may less consistently exercise good judgment when handling agricultural pesticides.

Children face the risk of pesticide exposure from work in pesticide-treated areas, from the use of pesticides near their homes, and from residues of pesticides brought home by family members after a day of working with pesticides or in pesticide-treated areas. The final rule is expected to reduce these exposures and risks. By establishing a minimum age for certain pesticide-related activities in agriculture, children would receive less exposure to pesticides that may lead to chronic or acute pesticide-related illness. Another requirement to reduce risk to children is training for workers and handlers on the risks presented by take-home pesticide exposure and how best to reduce it.

Like DOL's regulations that implement the FLSA, the rule regulates the ages at which children can work in certain agricultural activities. The rule establishes a minimum age of 18 for pesticide handlers and for early-entry workers, except those working on an establishment owned by an immediate family member. Since children in agriculture may face elevated risks of pesticide exposure due to their immaturity, failure to exercise good judgment, and developing bodies, EPA feels that they warrant special consideration in light of the Executive Order on children's health. EPA expects that the final rule will mitigate or eliminate many agricultural pesticide risks faced by youths.

Additional information on EPA's consideration of the risks to children in development of this action can be found in the Economic Analysis for this action (Ref. 1).

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

This action is not a "significant energy action" under Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution or use of energy.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards that would require Agency consideration under NTTAA section 12(d), 15 U.S.C. 272.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

EPA believes that this 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. In fact, the population of agricultural workers and handlers that the rule seeks to protect is comprised primarily of minority and low-income individuals. As reviewed in Unit IV.B.3., the farmworker community, due to occupation, economic status, health, language and other sociodemographic characteristics, faces an increased risk of pesticide exposure which this rulemaking seeks to reduce through improving communication and protections.

EPA engaged with stakeholders from affected communities extensively in the development of this rulemaking, in order to obtain meaningful involvement of all parties. EPA believes that the rule would improve the health of agricultural workers and handlers by, among other things, increasing the frequency of training, enhancing training content to include ways to minimize pesticide exposure to children and in the home, adding posting of treated areas near worker and handler housing to prevent accidental entry, and establishing a minimum age for pesticide handlers and early-entry workers.

K. Congressional Review Act (CRA)

This action is subject to the CRA, 5 U.S.C. 801 *et seq.*, and EPA submitted a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 170

Environmental protection, Agricultural worker, Employer, Farms, Forests, Greenhouses, Nurseries, Pesticide handler, Pesticides, Worker protection standard.

Dated: September 28, 2015.

Gina McCarthy,

Administrator.

Therefore, 40 CFR Chapter I is amended as follows:

PART 170—[AMENDED]

■ 1. The authority citation for part 170 continues to read as follows:

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

■ 2. Section 170.2 is added to subpart A to read as follows:

§ 170.2 Implementation and expiration dates.

(a) *Implementation date.* Beginning January 2, 2017, the requirements of § 170.301 through § 170.609 of this part shall apply to any pesticide product that bears the statement "Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170".

(b) *Expiration date.* Sections 170.1 through 170.260 of this part shall expire on, and will no longer be effective after January 2, 2017.

■ 3. In § 170.135, revise paragraphs (b) and (c)(1) to read as follows:

§ 170.135 Posted pesticide safety information.

* * * * *

(b) *Pesticide safety poster.* A safety poster must be displayed that conveys, at a minimum, the pesticide safety concepts listed in paragraphs (b)(1)(i) through (vii) and (b)(2) of this section. Displays conforming to § 170.311(a)(3) meet the requirements of this paragraph.

(c) * * *

(1) The name, address, and telephone number of the nearest emergency medical care facility shall be on the safety poster or displayed close to the safety poster. Displays conforming to § 170.311(a)(3)(ix) meet the requirements of this paragraph.

* * * * *

■ 4. In § 170.235, revise paragraphs (b) and (c)(1) to read as follows:

§ 170.235 Posted pesticide safety information.

* * * * *

(b) *Pesticide safety poster.* A safety poster must be displayed that conveys, at a minimum, the pesticide safety concepts listed in paragraphs (b)(1)(i) through (vii) and (b)(2) of this section. Displays conforming to § 170.311(a)(3) meet the requirements of this paragraph.

(c) * * *

(1) The name, address, and telephone number of the nearest emergency medical care facility shall be on the safety poster or displayed close to the

safety poster. Displays conforming to § 170.311(a)(3)(ix) meet the requirements of this paragraph.

* * * * *

■ 5. Subpart D is added to part 170 to read as follows:

Subpart D—General Provisions

Sec.
§ 170.301 Scope and purpose.
§ 170.303 Applicability of this part.
§ 170.305 Definitions.
§ 170.309 Agricultural employer duties.
§ 170.311 Display requirements for pesticide safety information and pesticide application and hazard information.
§ 170.313 Commercial pesticide handler employer duties.
§ 170.315 Prohibited actions.
§ 170.317 Violations of this part.

§ 170.301 Scope and purpose.

This regulation is primarily intended to reduce the risks of illness or injury to workers and handlers resulting from occupational exposures to pesticides used in the production of agricultural plants on agricultural establishments. It requires agricultural employers and commercial pesticide handler employers to provide specific information and protections to workers, handlers and other persons when pesticides are used on agricultural establishments in the production of agricultural plants. It also requires handlers to wear the labeling-specified clothing and personal protective equipment when performing handler activities, and to take measures to protect workers and other persons during pesticide applications.

§ 170.303 Applicability of this part.

(a) This regulation applies whenever a pesticide product bearing a label requiring compliance with this part is used in the production of agricultural plants on an agricultural establishment, except as provided in paragraphs (b) and (c) of this section.

(b) This regulation does not apply when a pesticide product bearing a label requiring compliance with this part is used on an agricultural establishment in any of the following circumstances:

(1) As part of government-sponsored public pest control programs over which the owner, agricultural employer and handler employer have no control, such as mosquito abatement and Mediterranean fruit fly eradication programs.

(2) On plants other than agricultural plants, which may include plants in home fruit and vegetable gardens and home greenhouses, and permanent plantings for ornamental purposes, such as plants that are in ornamental gardens, parks, public or private landscaping, lawns or other grounds that are intended only for aesthetic purposes or climatic modification.

(3) For control of vertebrate pests, unless directly related to the production of an agricultural plant.

(4) As attractants or repellents in traps.

(5) On the harvested portions of agricultural plants or on harvested timber.

(6) For research uses of unregistered pesticides.

(7) On pasture and rangeland where the forage will not be harvested for hay.

(8) In a manner not directly related to the production of agricultural plants, including, but not limited to structural pest control and control of vegetation in non-crop areas.

(c) Where a pesticide product's labeling-specific directions for use or other labeling requirements are inconsistent with requirements of this part, users must comply with the pesticide product labeling, except as provided for in §§ 170.601, 170.603 and 170.607.

§ 170.305 Definitions.

Terms used in this part have the same meanings they have in the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. In addition, the following terms, when used in this part, shall have the following meanings:

Agricultural employer means any person who is an owner of, or is responsible for the management or condition of, an agricultural establishment, and who employs any worker or handler.

Agricultural establishment means any farm, forest operation, or nursery engaged in the outdoor or enclosed space production of agricultural plants. An establishment that is not primarily agricultural is an agricultural establishment if it produces agricultural plants for transplant or use (in part or their entirety) in another location instead of purchasing the agricultural plants.

Agricultural plant means any plant, or part thereof, grown, maintained, or otherwise produced for commercial purposes, including growing, maintaining or otherwise producing plants for sale or trade, for research or experimental purposes, or for use in part or their entirety in another location. Agricultural plant includes, but is not limited to, grains, fruits and vegetables; wood fiber or timber products; flowering and foliage plants and trees; seedlings and transplants; and turf grass produced for sod. Agricultural plant does not include pasture or rangeland used for grazing.

Application exclusion zone means the area surrounding the application equipment that must be free of all persons other than appropriately trained and equipped handlers during pesticide applications.

Chemigation means the application of pesticides through irrigation systems.

Closed system means an engineering control used to protect handlers from pesticide exposure hazards when mixing and loading pesticides.

Commercial pesticide handler employer means any person, other than an agricultural employer, who employs any handler to perform handler activities on an agricultural establishment. A labor contractor who does not provide pesticide application services or supervise the performance of handler activities, but merely employs laborers who perform handler activities at the direction of an agricultural or handler employer, is not a commercial pesticide handler employer.

Commercial pesticide handling establishment means any enterprise, other than an agricultural establishment, that provides pesticide handler or crop advising services to agricultural establishments.

Crop advisor means any person who is assessing pest numbers, damage, pesticide distribution, or the status or requirements of agricultural plants.

Designated representative means any persons designated in writing by a worker or handler to exercise a right of access on behalf of the worker or handler to request and obtain a copy of the pesticide application and hazard information required by § 170.309(h) in accordance with § 170.311(b) of this part.

Early entry means entry by a worker into a treated area on the agricultural establishment after a pesticide application is complete, but before any restricted-entry interval for the pesticide has expired.

Employ means to obtain, directly or through a labor contractor, the services of a person in exchange for a salary or wages, including piece-rate wages, without regard to who may pay or who may receive the salary or wages. It includes obtaining the services of a self-employed person, an independent contractor, or a person compensated by a third party, except that it does not include an agricultural employer obtaining the services of a handler through a commercial pesticide handler employer or a commercial pesticide handling establishment.

Enclosed cab means a cab with a nonporous barrier that totally surrounds

the occupant(s) of the cab and prevents dermal contact with pesticides that are being applied outside of the cab.

Enclosed space production means production of an agricultural plant indoors or in a structure or space that is covered in whole or in part by any nonporous covering and that is large enough to permit a person to enter.

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.

Hand labor means any agricultural activity performed by hand or with hand tools that causes a worker to have substantial contact with plants, plant parts, or soil and other surfaces that may contain pesticide residues, except that hand labor does not include operating, moving, or repairing irrigation or watering equipment or performing crop advisor tasks.

Handler means any person, including a self-employed person, who is employed by an agricultural employer or commercial pesticide handler employer and performs any of the following activities:

(1) Mixing, loading, or applying pesticides.

(2) Disposing of pesticides.

(3) Handling opened containers of pesticides, emptying, triple-rinsing, or cleaning pesticide containers according to pesticide product labeling instructions, or disposing of pesticide containers that have not been cleaned. The term does not include any person who is only handling unopened pesticide containers or pesticide containers that have been emptied or cleaned according to pesticide product labeling instructions.

(4) Acting as a flagger.

(5) Cleaning, adjusting, handling, or repairing the parts of mixing, loading, or application equipment that may contain pesticide residues.

(6) Assisting with the application of pesticides.

(7) Entering an enclosed space after the application of a pesticide and before the inhalation exposure level listed in the labeling has been reached or one of the ventilation criteria established by § 170.405(b)(3) or the labeling has been met to operate ventilation equipment, monitor air levels, or adjust or remove coverings used in fumigation.

(8) Entering a treated area outdoors after application of any soil fumigant during the labeling-specified entry-restricted period to adjust or remove coverings used in fumigation.

(9) Performing tasks as a crop advisor during any pesticide application or restricted-entry interval, or before the inhalation exposure level listed in the pesticide product labeling has been reached or one of the ventilation criteria established by § 170.405(b)(3) or the pesticide product labeling has been met.

Handler employer means any person who is self-employed as a handler or who employs any handler.

Immediate family is limited to the spouse, parents, stepparents, foster parents, father-in-law, mother-in-law, children, stepchildren, foster children, sons-in-law, daughters-in-law, grandparents, grandchildren, brothers, sisters, brothers-in-law, sisters-in-law, aunts, uncles, nieces, nephews, and first cousins. "First cousin" means the child of a parent's sibling, *i.e.*, the child of an aunt or uncle.

Labor contractor means a person, other than a commercial pesticide handler employer, who employs workers or handlers to perform tasks on an agricultural establishment for an agricultural employer or a commercial pesticide handler employer.

Outdoor production means production of an agricultural plant in an outside area that is not enclosed or covered in any way that would obstruct the natural air flow.

Owner means any person who has a present possessory interest (*e.g.*, fee, leasehold, rental, or other) in an agricultural establishment. A person who has both leased such agricultural establishment to another person and granted that same person the right and full authority to manage and govern the use of such agricultural establishment is not an owner for purposes of this part.

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.

Restricted-entry interval means the time after the end of a pesticide application during which entry into the treated area is restricted.

Safety data sheet has the same meaning as the definition at 29 CFR 1900.1200(c).

Treated area means any area to which a pesticide is being directed or has been directed.

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 responsibilities related to worker notification, training of workers or handlers, providing decontamination supplies, providing pesticide safety information and pesticide application and hazard information, use and care of personal protective equipment, providing emergency assistance, and heat stress management.

(2) Application of the pesticide.

(3) Post-application activities intended to reduce the risks of illness and injury resulting from handlers' and workers' occupational exposures to pesticide residues during and after the restricted-entry interval, including responsibilities related to worker notification, training of workers or early-entry workers, providing decontamination supplies, providing pesticide safety information and pesticide application and hazard information, use and care of personal protective equipment, providing emergency assistance, and heat stress management.

(4) Other pesticide-related activities, including, but not limited to, transporting or storing pesticides that have been opened, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other pesticide-containing materials.

Worker means any person, including a self-employed person, who is employed and performs activities directly relating to the production of agricultural plants on an agricultural establishment.

Worker housing area means any place or area of land on or near an agricultural establishment where housing or space for housing is provided for workers or handlers by an agricultural employer, owner, labor contractor, or any other person responsible for the recruitment or employment of agricultural workers.

§ 170.309 Agricultural employer duties.

Agricultural employers must:

(a) Ensure that any pesticide is used in a manner consistent with the pesticide product labeling, including the requirements of this part, when applied on the agricultural establishment.

(b) Ensure that each worker and handler subject to this part receives the protections required by this part.

(c) Ensure that any handler and any early entry worker is at least 18 years old.

(d) Provide to each person, including labor contractors, who supervises any workers or handlers information and directions sufficient to ensure that each

worker and handler receives the protections required by this part. Such information and directions must specify the tasks for which the supervisor is responsible in order to comply with the provisions of this part.

(e) Require each person, including labor contractors, who supervises any workers or handlers to provide sufficient information and directions to each worker and handler to ensure that they can comply with the provisions of this part.

(f) Provide emergency assistance in accordance with this paragraph. If there is reason to believe that a worker or handler has experienced a potential pesticide exposure during his or her employment on the agricultural establishment or shows symptoms similar to those associated with acute exposure to pesticides during or within 72 hours after his or her employment on the agricultural establishment, and needs emergency medical treatment, the agricultural employer must do all of the following promptly after learning of the possible poisoning or injury:

(1) Make available to that person transportation from the agricultural establishment, including any worker housing area on the establishment, to an operating medical care facility capable of providing emergency medical treatment to a person exposed to pesticides.

(2) Provide all of the following information to the treating medical personnel:

(i) Copies of the applicable safety data sheet(s) and the product name(s), EPA registration number(s) and active ingredient(s) for each pesticide product to which the person may have been exposed.

(ii) The circumstances of application or use of the pesticide on the agricultural establishment.

(iii) The circumstances that could have resulted in exposure to the pesticide.

(g) Ensure that workers or other persons employed by the agricultural establishment do not clean, repair, or adjust pesticide application equipment, unless trained as a handler under § 170.501. Before allowing any person not directly employed by the agricultural establishment to clean, repair, or adjust equipment that has been used to mix, load, transfer, or apply pesticides, the agricultural employer must provide all of the following information to such person:

(1) Pesticide application equipment may be contaminated with pesticides.

(2) The potentially harmful effects of exposure to pesticides.

(3) Procedures for handling pesticide application equipment and for limiting exposure to pesticide residues.

(4) Personal hygiene practices and decontamination procedures for preventing pesticide exposures and removing pesticide residues.

(h) Display, maintain, and provide access to pesticide safety information and pesticide application and hazard information in accordance with § 170.311 if workers or handlers are on the establishment and within the last 30 days a pesticide product has been used or a restricted-entry interval for such pesticide has been in effect on the establishment.

(i) Ensure that before a handler uses any equipment for mixing, loading, transferring, or applying pesticides, the handler is instructed in the safe operation of such equipment.

(j) 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, and any damaged equipment is repaired or replaced.

(k) Ensure that whenever handlers employed by a commercial pesticide handling establishment will be on an agricultural establishment, the handler employer is provided information about, or is aware of, the specific location and description of any treated areas on the agricultural establishment where a restricted-entry interval is in effect that the handler may be in (or may walk within ¼ mile of), and any restrictions on entering those areas.

(l) Ensure that workers do not enter any area on the agricultural establishment where a pesticide has been applied until the applicable pesticide application and hazard information for each pesticide product applied to that area is displayed in accordance with § 170.311(b), and until after the restricted-entry interval has expired and all treated area warning signs have been removed or covered, except for entry permitted by § 170.603 of this part.

(m) Provide any records or other information required by this part for inspection and copying upon request by an employee of EPA or any duly authorized representative of a Federal, State or Tribal government agency responsible for pesticide enforcement.

§ 170.311 Display requirements for pesticide safety information and pesticide application and hazard information.

(a) *Display of Pesticide Safety Information.* Whenever pesticide safety information and pesticide application and hazard information are required to be provided under § 170.309(h), pesticide safety information must be displayed in accordance with this paragraph.

(1) *General.* The pesticide safety information must be conveyed in a manner that workers and handlers can understand.

(2) *Content prior to January 1, 2018.* Prior to January 1, 2018, the safety information must include all of the following points:

(i) Help keep pesticides from entering your body. Avoid getting on your skin or into your body any pesticides that may be on plants and soil, in irrigation water, or drifting from nearby applications.

(ii) Wash before eating, drinking, using chewing gum or tobacco, or using the toilet.

(iii) Wear work clothing that protects the body from pesticide residues (long-sleeved shirts, long pants, shoes and socks, and a hat or scarf).

(iv) Wash or shower with soap and water, shampoo hair, and put on clean clothes after work.

(v) Wash work clothes separately from other clothes before wearing them again.

(vi) Wash immediately in the nearest clean water if pesticides are spilled or sprayed on the body. As soon as possible, shower, shampoo, and change into clean clothes.

(vii) Follow directions about keeping out of treated or restricted areas.

(viii) The name, address, and telephone number of a nearby operating medical care facility capable of providing emergency medical treatment. This information must be clearly identified as emergency medical contact information on the display.

(ix) There are Federal rules to protect workers and handlers, including a requirement for safety training.

(3) *Content after January 1, 2018.* After January 1, 2018, the pesticide safety information must include all of the points in § 170.311(a)(3)(i)–(x) instead of the points listed in § 170.311(a)(2)(i)–(ix).

(i) Avoid getting on the skin or into the body any pesticides that may be on or in plants, soil, irrigation water, tractors, and other equipment, on used personal protective equipment, or drifting from nearby applications.

(ii) Wash before eating, drinking, using chewing gum or tobacco, or using the toilet.

(iii) Wear work clothing that protects the body from pesticide residues (long-sleeved shirts, long pants, shoes and socks, and a hat or scarf).

(iv) Wash or shower with soap and water, shampoo hair, and put on clean clothes after work.

(v) Wash work clothes separately from other clothes before wearing them again.

(vi) If pesticides are spilled or sprayed on the body use decontamination supplies to wash immediately, or rinse off in the nearest clean water, including springs, streams, lakes or other sources if more readily available than decontamination supplies, and as soon as possible, wash or shower with soap and water, shampoo hair, and change into clean clothes.

(vii) Follow directions about keeping out of treated areas and application exclusion zones.

(viii) Instructions to employees to seek medical attention as soon as possible if they believe they have been poisoned, injured or made ill by pesticides.

(ix) The name, address, and telephone number of a nearby operating medical care facility capable of providing emergency medical treatment. This information must be clearly identified as emergency medical contact information on the display.

(x) The name, address and telephone number of the State or Tribal pesticide regulatory agency.

(4) *Changes to pesticide safety information.* The agricultural employer must update the pesticide safety information display within 24 hours of notice of any changes to the information required in §§ 170.311(a)(2)(viii) or 170.311(a)(3)(ix).

(5) *Location.* The pesticide safety information must be displayed at each of the following sites on the agricultural establishment:

(i) The site selected pursuant to § 170.311(b)(2) for display of pesticide application and hazard information.

(ii) Anywhere that decontamination supplies must be provided on the agricultural establishment pursuant to §§ 170.411, 170.509 or 170.605, but only when the decontamination supplies are located at permanent sites or being provided at locations and in quantities to meet the requirements for 11 or more workers or handlers.

(6) *Accessibility.* When pesticide safety information is required to be displayed, workers and handlers must be allowed access to the pesticide safety information at all times during normal work hours.

(7) *Legibility.* The pesticide safety information must remain legible at all times when the information is required to be displayed.

(b) *Keeping and displaying pesticide application and hazard information.* Whenever pesticide safety information and pesticide application and hazard information is required to be provided under § 170.309(h), pesticide application and hazard information for any pesticides that are used on the agricultural establishment must be displayed, retained, and made accessible in accordance with this paragraph.

(1) *Content.* The pesticide application and hazard information must include all of the following information for each pesticide product applied:

(i) A copy of the safety data sheet.

(ii) The name, EPA registration number, and active ingredient(s) of the pesticide product.

(iii) The crop or site treated and the location and description of the treated area.

(iv) The date(s) and times the application started and ended.

(v) The duration of the applicable labeling-specified restricted-entry interval for that application.

(2) *Location.* The pesticide application and hazard information must be displayed at a place on the agricultural establishment where workers and handlers are likely to pass by or congregate and where it can be readily seen and read.

(3) *Accessibility.* When the pesticide application and hazard information is required to be displayed, workers and handlers must be allowed access to the location of the information at all times during normal work hours.

(4) *Legibility.* The pesticide application and hazard information must remain legible at all times when the information is required to be displayed.

(5) *Timing.* The pesticide application and hazard information for each pesticide product applied must be displayed no later than 24 hours after the end of the application of the pesticide. The pesticide application and hazard information must be displayed continuously from the beginning of the display period until at least 30 days after the end of the last applicable restricted-entry interval, or until workers or handlers are no longer on the establishment, whichever is earlier.

(6) *Record retention.* Whenever pesticide safety information and pesticide application and hazard information is required to be displayed in accordance with this paragraph (b), the agricultural employer must retain the pesticide application and hazard information described in § 170.311(b)(1) on the agricultural establishment for two years after the date of expiration of the restricted-entry interval applicable to the pesticide application conducted.

(7) *Access to pesticide application and hazard information by a worker or handler.*

(i) If a person is or was employed as a worker or handler by an establishment during the period that particular pesticide application and hazard information was required to be displayed and retained for two years in accordance with §§ 170.311(b)(5) and 170.311(b)(6), and the person requests a copy of such application and/or hazard information, or requests access to such application and/or hazard information after it is no longer required to be displayed, the agricultural employer must provide the worker or handler with a copy of or access to all of the requested information within 15 days of the receipt of any such request. The worker or handler may make the request orally or in writing.

(ii) Whenever a record has been previously provided without cost to a worker or handler or their designated representative, the agricultural employer may charge reasonable, non-discriminatory administrative costs (*i.e.,* search and copying expenses but not including overhead expenses) for a request by the worker or handler for additional copies of the record.

(8) Access to pesticide application and hazard information by treating medical personnel. Any treating medical personnel, or any person acting under the supervision of treating medical personnel, may request, orally or in writing, access to or a copy of any information required to be retained for two years by § 170.311(b)(6) in order to inform diagnosis or treatment of a worker or handler who was employed on the establishment during the period that the information was required to be displayed. The agricultural employer must promptly provide a copy of or access to all of the requested information applicable to the worker's or handler's time of employment on the establishment after receipt of the request.

(9) *Access to pesticide application and hazard information by a designated representative.*

(i) Any worker's or handler's designated representative may request access to or a copy of any information required to be retained for two years by § 170.311(b)(6) on behalf of a worker or handler employed on the establishment during the period that the information was required to be displayed. The agricultural employer must provide access to or a copy of the requested information applicable to the worker's or handler's time of employment on the establishment within 15 days after receiving any such request, provided the request meets the requirements specified in § 170.311(b)(9)(ii).

(ii) A request by a designated representative for access to or a copy of any pesticide application and/or hazard

information must be in writing and must contain all of the following:

(A) The name of the worker or handler being represented.

(B) A description of the specific information being requested. The description should include the dates of employment of the worker or handler, the date or dates for which the records are requested, type of work conducted by the worker or handler (*e.g.*, planting, harvesting, applying pesticides, mixing or loading pesticides) during the period for which the records are requested, and the specific application and/or hazard information requested.

(C) A written statement clearly designating the representative to request pesticide application and hazard information on the worker's or handler's behalf, bearing the worker's or handler's printed name and signature, the date of the designation, and the printed name and contact information for the designated representative.

(D) If the worker or handler requests that the pesticide application and/or the hazard information be sent, direction for where to send the information (*e.g.*, mailing address or email address).

(iii) If the written request from a designated representative contains all of the necessary information specified in § 170.313(b)(9)(ii), the employer must provide a copy of or access to all of the requested information applicable to the worker's or handler's time of employment on the establishment to the designated representative within 15 days of receiving the request.

(iv) Whenever a record has been previously provided without cost to a worker or handler or their designated representative, the agricultural employer may charge reasonable, non-discriminatory administrative costs (*i.e.*, search and copying expenses but not including overhead expenses) for a request by the designated representative for additional copies of the record.

§ 170.313 Commercial pesticide handler employer duties.

Commercial pesticide handler employers must:

(a) Ensure that any pesticide is used in a manner consistent with the pesticide product labeling, including the requirements of this part, when applied on an agricultural establishment by a handler employed by the commercial pesticide handling establishment.

(b) Ensure each handler employed by the commercial pesticide handling establishment and subject to this part receives the protections required by this part.

(c) Ensure that any handler employed by the commercial pesticide handling establishment is at least 18 years old.

(d) Provide to each person, including labor contractors, who supervises any handlers employed by the commercial pesticide handling establishment, information and directions sufficient to ensure that each handler receives the protections required by this part. Such information and directions must specify the tasks for which the supervisor is responsible in order to comply with the provisions of this part.

(e) Require each person, including labor contractors, who supervises any handlers employed by the commercial pesticide handling establishment, to provide sufficient information and directions to each handler to ensure that the handler can comply with the provisions of this part.

(f) Ensure that before any handler employed by the commercial pesticide handling establishment uses any equipment for mixing, loading, transferring, or applying pesticides, the handler is instructed in the safe operation of such equipment.

(g) Ensure that, before each day of use, equipment used by their employees for mixing, loading, transferring, or applying pesticides is inspected for leaks, obstructions, and worn or damaged parts, and any damaged equipment is repaired or is replaced.

(h) Ensure that whenever a handler who is employed by a commercial pesticide handling establishment will be on an agricultural establishment, the handler is provided information about, or is aware of, the specific location and description of any treated areas where a restricted-entry interval is in effect, and the restrictions on entering those areas.

(i) Provide the agricultural employer all of the following information before the application of any pesticide on an agricultural establishment:

(1) Specific location(s) and description of the area(s) to be treated.

(2) The date(s) and start and estimated end times of application.

(3) Product name, EPA registration number, and active ingredient(s).

(4) The labeling-specified restricted-entry interval applicable for the application.

(5) Whether posting, oral notification or both are required under § 170.409.

(6) Any restrictions or use directions on the pesticide product labeling that must be followed for protection of workers, handlers, or other persons during or after application.

(j) If there are any changes to the information provided in § 170.313(i)(1), § 170.313(i)(4), § 170.313(i)(5), § 170.313(i)(6) or if the start time for the application will be earlier than originally forecasted or scheduled, ensure that the agricultural employer is provided updated information prior to the application. If there are any changes to any other information provided pursuant to § 170.313(i), the commercial pesticide handler employer must provide updated information to the agricultural employer within two hours after completing the application. Changes to the estimated application end time of less than one hour need not be reported to the agricultural employer.

(k) Provide emergency assistance in accordance with this paragraph. If there is reason to believe that a handler employed by the commercial pesticide handling establishment has experienced a potential pesticide exposure during his or her employment by the commercial pesticide handling establishment or shows symptoms similar to those associated with acute exposure to pesticides during or within 72 hours after his or her employment by the commercial pesticide handling establishment, and needs emergency medical treatment, the commercial pesticide handler employer must do all of the following promptly after learning of the possible poisoning or injury:

(1) Make available to that person transportation from the commercial pesticide handling establishment, or any agricultural establishment on which that handler may be working on behalf of the commercial pesticide handling establishment, to an operating medical care facility capable of providing emergency medical treatment to a person exposed to pesticides.

(2) Provide all of the following information to the treating medical personnel:

(i) Copies of the applicable safety data sheet(s) and the product name(s), EPA registration number(s) and active ingredient(s) for each pesticide product to which the person may have been exposed.

(ii) The circumstances of application or use of the pesticide.

(iii) The circumstances that could have resulted in exposure to the pesticide.

(l) Ensure that persons directly employed by the commercial pesticide handling establishment do not clean, repair, or adjust pesticide application equipment, unless trained as a handler under § 170.501. Before allowing any person not directly employed by the commercial pesticide handling establishment to clean, repair, or adjust equipment that has been used to mix, load, transfer, or apply pesticides, the commercial pesticide handler employer

must provide all of the following information to such persons:

(1) Notice that the pesticide application equipment may be contaminated with pesticides.

(2) The potentially harmful effects of exposure to pesticides.

(3) Procedures for handling pesticide application equipment and for limiting exposure to pesticide residues.

(4) Personal hygiene practices and decontamination procedures for preventing pesticide exposures and removing pesticide residues.

(m) Provide any records or other information required by this part for inspection and copying upon request by an employee of EPA or any duly authorized representative of a Federal, State or Tribal government agency responsible for pesticide enforcement.

§ 170.315 Prohibited actions.

No agricultural employer, commercial pesticide handler employer, or other person involved in the use of a pesticide to which this part applies, shall intimidate, threaten, coerce, or discriminate against any worker or handler for complying with or attempting to comply with this part, or because the worker or handler provided, caused to be provided or is about to provide information to the employer or the EPA or any duly authorized representative of a Federal, State or Tribal government regarding conduct that the worker or handler reasonably believes violates this part, has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing concerning compliance with this part, or has objected to, or refused to participate in, any activity, policy, practice, or assigned task that the worker or handler reasonably believed to be in violation of this part. Any such intimidation, threat, coercion, or discrimination violates FIFRA section 12(a)(2)(G), 7 U.S.C. 136j(a)(2)(G).

§ 170.317 Violations of this part.

(a) Under FIFRA section 12(a)(2)(G), it is unlawful for any person "to use any registered pesticide in a manner inconsistent with its labeling." When this part is referenced on a label, users must comply with all of its requirements, except those that are inconsistent with product-specific instructions on the pesticide product labeling, except as provided for in §§ 170.601, 170.603 and 170.607.

(b) A person who has a duty under this part, as referenced on the pesticide product labeling, and who fails to perform that duty, violates FIFRA section 12(a)(2)(G) and is subject to a civil penalty under section 14. A person who knowingly violates section 12(a)(2)(G) is subject to section 14 criminal sanctions.

(c) FIFRA section 14(b)(4) provides that a person is liable for a penalty under FIFRA if another person employed by or acting for that person violates any provision of FIFRA. The term "acting for" includes both employment and contractual relationships, including, but not limited to, labor contractors.

(d) The requirements of this part, including the decontamination requirements, must not, for the purposes of section 653(b)(1) of Title 29 of the U.S. Code, be deemed to be the exercise of statutory authority to prescribe or enforce standards or regulations affecting the general sanitary hazards addressed by the OSHA Field Sanitation Standard, 29 CFR 1928.110, or other agricultural non-pesticide hazards.

■ 6. Subpart E is added to part 170 to read as follows:

Subpart E—Requirements for Protection of Agricultural Workers

Sec.

§ 170.401 Training requirements for workers.
§ 170.403 Establishment-specific information for workers.
§ 170.405 Entry restrictions associated with pesticide applications.
§ 170.407 Worker entry restrictions after pesticide applications.
§ 170.409 Oral and posted notification of worker entry restrictions.
§ 170.411 Decontamination supplies for workers.

§ 170.401 Training requirements for workers.

(a) *General requirement.* Before any worker performs any task in a treated area on an agricultural establishment where within the last 30 days a pesticide product has been used or a restricted-entry interval for such pesticide has been in effect, the agricultural employer must ensure that each worker has been trained in accordance with this section within the last 12 months, except as provided in paragraph (b) of this section.

(b) *Exceptions.* The following workers need not be trained under this section:

(1) A worker who is currently certified as an applicator of restricted use pesticides under part 171 of this chapter.

(2) A worker who has satisfied the handler training requirements in § 170.501.

(3) A worker who is certified or licensed as a crop advisor by a program acknowledged as appropriate in writing by EPA or the State or Tribal agency responsible for pesticide enforcement, provided that such certification or licensing requires pesticide safety training that includes all the topics in § 170.501(c)(2) or § 170.501(c)(3) as applicable depending on the date of training.

(c) *Training programs.* (1) Pesticide safety training must be presented to workers either orally from written materials or audio-visually, at a location that is reasonably free from distraction and conducive to training. All training materials must be EPA-approved. The training must be presented in a manner that the workers can understand, such as through a translator. The training must be conducted by a person who meets the worker trainer requirements of paragraph (c)(4) of this section, and who must be present during the entire training program and must respond to workers' questions.

(2) The training must include, at a minimum, all of the following topics:

(i) Where and in what form pesticides may be encountered during work activities.

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

(iii) Routes through 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, including emergency eye flushing techniques.

(viii) Hazards from chemigation and drift.

(ix) Hazards from pesticide residues on clothing.

(x) Warnings about taking pesticides or pesticide containers home.

(xi) Requirements of this subpart designed to reduce the risks of illness or injury resulting from workers' occupational exposure to pesticides, including application and entry restrictions, the design of the warning sign, posting of warning signs, oral warnings, the availability of specific information about applications, and the protection against retaliatory acts.

(3) EPA intends to make available to the public training materials that may be used to conduct training conforming to the requirements of this section. Within 180 days after a notice of availability of such training materials appears in the **Federal Register**, but no earlier than January 1, 2018, training programs required under this section must include, at a minimum, all of the topics

listed in § 170.401(c)(3)(i)–(xxiii) instead of the topics listed in § 170.401(c)(2)(i)–(xi).

(i) The responsibility of agricultural employers to provide workers and handlers with information and protections designed to reduce work-related pesticide exposures and illnesses. This includes ensuring workers and handlers have been trained on pesticide safety, providing pesticide safety and application and hazard information, decontamination supplies and emergency medical assistance, and notifying workers of restrictions during applications and on entering pesticide treated areas. A worker or handler may designate in writing a representative to request access to pesticide application and hazard information.

(ii) How to recognize and understand the meaning of the posted warning signs used for notifying workers of restrictions on entering pesticide treated areas on the establishment.

(iii) How to follow directions and/or signs about keeping out of pesticide treated areas subject to a restricted-entry interval and application exclusion zones.

(iv) Where and in what forms pesticides may be encountered during work activities, and potential sources of pesticide exposure on the agricultural establishment. This includes exposure to pesticide residues that may be on or in plants, soil, tractors, application and chemigation equipment, or used personal protective equipment, and that pesticides may drift through the air from nearby applications or be in irrigation water.

(v) Potential hazards from toxicity and exposure that pesticides present to workers and their families, including acute and chronic effects, delayed effects, and sensitization.

(vi) Routes through which pesticides can enter the body.

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

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

(ix) Routine and emergency decontamination procedures, including emergency eye flushing techniques, and if pesticides are spilled or sprayed on the body to use decontamination supplies to wash immediately or rinse off in the nearest clean water, including springs, streams, lakes or other sources if more readily available than decontamination supplies, and as soon as possible, wash or shower with soap and water, shampoo hair, and change into clean clothes.

(x) How and when to obtain emergency medical care.

(xi) When working in pesticide treated areas, wear work clothing that protects the body from pesticide residues and wash hands before eating, drinking, using chewing gum or tobacco, or using the toilet.

(xii) Wash or shower with soap and water, shampoo hair, and change into clean clothes as soon as possible after working in pesticide treated areas.

(xiii) Potential hazards from pesticide residues on clothing.

(xiv) Wash work clothes before wearing them again and wash them separately from other clothes.

(xv) Do not take pesticides or pesticide containers used at work to your home.

(xvi) Safety data sheets provide hazard, emergency medical treatment and other information about the pesticides used on the establishment they may come in contact with. The responsibility of agricultural employers to do all of the following:

(A) Display safety data sheets for all pesticides used on the establishment.

(B) Provide workers and handlers information about the location of the safety data sheets on the establishment.

(C) Provide workers and handlers unimpeded access to safety data sheets during normal work hours.

(xvii) The rule prohibits agricultural employers from allowing or directing any worker to mix, load or apply pesticides or assist in the application of pesticides unless the worker has been trained as a handler.

(xviii) The responsibility of agricultural employers to provide specific information to workers before directing them to perform early-entry activities. Workers must be 18 years old to perform early-entry activities.

(xix) Potential hazards to children and pregnant women from pesticide exposure.

(xx) Keep children and nonworking family members away from pesticide treated areas.

(xxi) After working in pesticide treated areas, remove work boots or shoes before entering your home, and remove work clothes and wash or shower before physical contact with children or family members.

(xxii) How to report suspected pesticide use violations to the State or Tribal agency responsible for pesticide enforcement.

(xxiii) The rule prohibits agricultural employers from intimidating, threatening, coercing, or discriminating against any worker or handler for complying with or attempting to comply with the requirements of this rule, or because the worker or handler provided, caused to be provided or is about to provide information to the employer or the EPA or its agents regarding conduct that the employee reasonably believes violates this part, and/or made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing concerning compliance with this rule.

(4) The person who conducts the training must meet one of the following criteria:

(i) Be designated as a trainer of certified applicators, handlers or workers by EPA or the State or Tribal agency responsible for pesticide enforcement.

(ii) Have completed an EPA-approved pesticide safety train-the-trainer program for trainers of workers.

(iii) Be currently certified as an applicator of restricted use pesticides under part 171 of this chapter.

(d) *Recordkeeping.* (1) For each worker required to be trained under paragraph (a), the agricultural employer must maintain on the agricultural establishment, for two years from the date of the training, a record documenting each worker's training including all of the following:

(i) The trained worker's printed name and signature.

(ii) The date of the training.

(iii) Information identifying which EPA-approved training materials were used.

(iv) The trainer's name and documentation showing that the trainer met the requirements of § 170.401(c)(4) at the time of training.

(v) The agricultural employer's name.

(2) An agricultural employer who provides, directly or indirectly, training required under paragraph (a) must provide to the worker upon request a copy of the record of the training that contains the information required under § 170.401(d)(1).

§ 170.403 Establishment-specific information for workers.

Before any worker performs any activity in a treated area on an agricultural establishment where within the last 30 days a pesticide product has been used, or a restricted-entry interval for such pesticide has been in effect, the agricultural employer must ensure that the worker has been informed of, in a manner the worker can understand, all of the following establishment-specific information:

(a) The location of pesticide safety information required by § 170.311(a).

(b) The location of pesticide application and hazard information required by § 170.311(b).

(c) The location of decontamination supplies required by § 170.411.

§ 170.405 Entry restrictions associated with pesticide applications.

(a) *Outdoor production pesticide applications.* (1) The application exclusion zone is defined as follows:

(i) The application exclusion zone is the area that extends 100 feet horizontally from the application equipment in all directions during application when the pesticide is applied by any of the following methods:

(A) Aerially.

(B) Air blast application.

(C) As a spray using a spray quality (droplet spectrum) of smaller than medium (volume median diameter of less than 294 microns).

(D) As a fumigant, smoke, mist, or fog.

(ii) The application exclusion zone is the area that extends 25 feet horizontally from the application equipment in all directions during application when the pesticide is applied not as in § 170.405(a)(1)(i)(A)–(D) and is sprayed from a height of greater than 12 inches from the planting medium using a spray quality (droplet spectrum) of medium or larger (volume median diameter of 294 microns or greater).

(iii) There is no application exclusion zone when the pesticide is applied in a manner other than those covered in paragraphs (a)(1)(i) and (a)(1)(ii) of this section.

(2) During any outdoor production pesticide application, the agricultural employer must not allow or direct any worker or other person, other than an appropriately trained and equipped handler involved in the application, to enter or to remain in the treated area or an application exclusion zone that is within the boundaries of the establishment until the application is complete.

(3) After the application is complete, the area subject to the labeling-specified restricted-entry interval and the post-application entry restrictions specified in § 170.407 is the treated area.

(b) *Enclosed space production pesticide applications.* (1) During any enclosed space production pesticide application described in column A of the Table under paragraph (b)(4) of this section, the agricultural employer must not allow or direct any worker or other person, other than an appropriately trained and equipped handler involved in the application, to enter or to remain in the area specified in column B of the Table under paragraph (b)(4) of this section during the application and until the time specified in column C of the Table under paragraph (b)(4) of this section has expired.

(2) After the time specified in column C of the Table under paragraph (b)(4) of this section has expired, the area subject to the labeling-specified restricted-entry interval and the post-application entry restrictions specified in § 170.407 is the area specified in column D of the Table under paragraph (b)(4) of this section.

(3) When column C of the Table under paragraph (b)(4) of this section specifies that ventilation criteria must be met, ventilation must continue until the air concentration is measured to be equal to or less than the inhalation exposure level required by the labeling. If no inhalation exposure level is listed on the labeling, ventilation must continue until after one of the following conditions is met:

(i) Ten air exchanges are completed.

(ii) Two hours of ventilation using fans or other mechanical ventilating systems.

(iii) Four hours of ventilation using vents, windows, or other passive ventilation.

(iv) Eleven hours with no ventilation followed by one hour of mechanical ventilation.

(v) Eleven hours with no ventilation followed by two hours of passive ventilation.

(vi) Twenty-four hours with no ventilation.

(4) The following Table applies to paragraphs (b)(1), (2), and (3) of this section.

TABLE—ENTRY RESTRICTIONS DURING ENCLOSED SPACE PRODUCTION PESTICIDE APPLICATIONS

A. When a pesticide is applied:	B. Workers and other persons, other than appropriately trained and equipped handlers, are prohibited in:	C. Until:	D. After the expiration of time specified in column C, the area subject to the restricted-entry interval is:
(1) As a fumigant	Entire enclosed space plus any adjacent structure or area that cannot be sealed off from the treated area.	The ventilation criteria of paragraph (b)(3) of this section are met.	No post-application entry restrictions required by § 170.407 after criteria in column C are met.
(2) As a (i) Smoke, or (ii) Mist, or (iii) Fog, or (iv) As a spray using a spray quality (droplet spectrum) of smaller than medium (volume median diameter of less than 294 microns).	Entire enclosed space	The ventilation criteria of paragraph (b)(3) of this section are met.	Entire enclosed space.
(3) Not as in (1) or (2), and for which a respiratory protection device is required for application by the pesticide product labeling.	Entire enclosed space	The ventilation criteria of paragraph (b)(3) of this section are met.	Treated area.
(4) Not as in (1), (2) or (3), and: (i) From a height of greater than 12 inches from the planting medium, or (ii) As a spray using a spray quality (droplet spectrum) of medium or larger (volume median diameter of 294 microns or greater).	Treated area plus 25 feet in all directions of the treated area, but not outside the enclosed space.	Application is complete	Treated area.
(5) Otherwise	Treated area	Application is complete	Treated area.

§ 170.407 Worker entry restrictions after pesticide applications.

(a) After the application of any pesticide to an area of outdoor production, the agricultural employer must not allow or direct any worker to enter or to remain in the treated area before the restricted-entry interval specified on the pesticide product labeling has expired and all treated area warning signs have been removed or covered, except for early-entry activities permitted by § 170.603.

(b) After the application of any pesticide to an area of enclosed space production, the agricultural employer must not allow or direct any worker to enter or to remain in the areas specified in column D of the Table in § 170.405(b)(4), before the restricted-entry interval specified on the pesticide product labeling has expired and all treated area warning signs have been removed or covered, except for early-entry activities permitted by § 170.603.

(c) When two or more pesticides are applied to a treated area at the same time, the applicable restricted-entry interval is the longest of all applicable restricted-entry intervals.

§ 170.409 Oral and posted notification of worker entry restrictions.

(a) *General Requirement.* The agricultural employer must notify workers of all entry restrictions required by §§ 170.405 and 170.407 in accordance with this section.

(1) *Type of notification required*—(i) *Double notification.* If the pesticide product labeling has a statement requiring both the posting of treated areas and oral notification to workers, the agricultural employer must post signs in accordance with paragraph (b) of this section and must also provide oral notification of the application to workers in accordance with paragraph (c) of this section.

(ii) *Outdoor production areas subject to restricted-entry intervals greater than 48 hours.* If a pesticide with product labeling that requires a restricted-entry interval greater than 48 hours is applied to an outdoor production area, the agricultural employer must notify workers of the application by posting warning signs in accordance with paragraph (b) of this section.

(iii) *Outdoor production areas subject to restricted-entry intervals equal to or less than 48 hours.* If a pesticide with product labeling that requires a restricted-entry interval equal to or less than 48 hours is applied to an outdoor production area, the agricultural employer must notify workers of the application either by posting warning signs in accordance with paragraph (b) of this section or by providing workers with an oral warning in accordance with paragraph (c) of this section.

(iv) *Enclosed space production areas subject to restricted-entry intervals greater than four hours.* If a pesticide with product labeling that requires a restricted-entry interval greater than four hours is applied to an enclosed space production area, the agricultural employer must notify workers of the application by posting warning signs in accordance with paragraph (b) of this section.

(v) *Enclosed space production areas subject to restricted-entry intervals equal to or less than four hours.* If a pesticide with product labeling that requires a restricted-entry interval equal to or less than four hours is applied to an enclosed space production area, the agricultural employer must notify workers of the application either by posting warning signs in accordance with paragraph (b) of this section or by providing workers with an oral warning in accordance with paragraph (c) of this section.

(2) *Exceptions.* Notification does not need to be given to a worker if the agricultural employer can ensure that one of the following is met:

(i) From the start of the application in an enclosed space production area until the end of any restricted-entry interval, the worker will not enter any part of the entire enclosed structure or space.

(ii) From the start of the application to an outdoor production area until the end of any restricted-entry interval, the worker will not enter, work in, remain in, or pass on foot through the treated area or any area within ¼ mile of the treated area on the agricultural establishment.

(iii) The worker was involved in the application of the pesticide as a handler, and is aware of all information required by paragraph (c)(1) of this section.

(b) *Requirements for posted warning signs.* If notification by posted warning signs is required pursuant to paragraph (a) of this section, the agricultural employer must, unless otherwise prescribed by the label, ensure that all warning signs meet the requirements of this paragraph. When several contiguous areas are to be treated with pesticides on a rotating or sequential basis, the entire area may be posted. Worker entry is prohibited for the entire area while the signs are posted, except for entry permitted by § 170.603 of this part.

(1) *General.* The warning signs must meet all of the following requirements:

(i) Be one of the three sizes specified in paragraph (b)(3) of this section and comply with the posting placement and spacing requirements applicable to that sign size.

(ii) Be posted prior to but no earlier than 24 hours before the scheduled application of the pesticide.

(iii) Remain posted throughout the application and any restricted-entry interval.

(iv) Be removed or covered within three days after the end of the application or any restricted-entry interval, whichever is later, except that signs may remain posted after the restricted-entry interval has expired as long as all of the following conditions are met:

(A) The agricultural employer instructs any workers on the establishment that may come within ¼ mile of the treated area not to enter that treated area while the signs are posted.

(B) The agricultural employer ensures that workers do not enter the treated area while the signs remain posted, other than entry permitted by § 170.603 of this part.

(v) Remain visible and legible during the time they are required to be posted.

(2) *Content.* (i) The warning sign must have a white background. The words "DANGER" and "PELIGRO," plus "PESTICIDES" and "PESTICIDAS," must be at the top of the sign, and the words "KEEP OUT" and "NO ENTRE" must be at the bottom of the sign. Letters for all words must be clearly legible. A circle containing an upraised hand on the left and a stern face on the right must be near the center of the sign. The inside of the circle must be red, except that the hand and a large portion of the face must be in white. The length of the hand must be at least twice the height of the smallest letters. The length of the face must be only slightly smaller than the hand. Additional information such as the name of the pesticide and the date of application may appear on the warning sign if it does not detract from the size and appearance of the sign or change the meaning of the required information. An example of a warning sign meeting these requirements, other than the size and color requirements, follows:

(ii) The agricultural employer may replace the Spanish language portion of the warning sign with equivalent terms in an alternative non-English language if that alternative language is the language read by the largest group of workers at that agricultural establishment who do not read English. The alternative language sign must be in the same format as the original sign and conform to all other requirements of paragraph (b)(2)(i) of this section.

(3) *Size and posting.* (i) The standard sign must be at least 14 inches by 16 inches with letters at least one inch in height.

(ii) When posting an outdoor production area using the standard sign, the signs must be visible from all reasonably expected points of worker entry to the treated area, including at least each access road, each border with any worker housing area within 100 feet of the treated area and each footpath and other walking route that enters the treated area. Where there are no reasonably expected points of worker entry, signs must be posted in the corners of the treated area or in any other location affording maximum visibility.

(iii) When posting an enclosed space production area using the standard sign and the entire structure or space is subject to the labeling-specified restricted-entry interval and the post-application entry restrictions specified in § 170.407, the signs must be posted so they are visible from all reasonably expected points of worker entry to the structure or space. When posting treated areas in enclosed space production using the standard sign and the treated area only comprises a subsection of the structure or space, the signs must be posted so they are visible from all reasonably expected points of worker entry to the treated area including each aisle or other walking route that enters the treated area. Where there are no reasonably expected points of worker entry to the treated area, signs must be posted in the corners of the treated area or in any other location affording maximum visibility.

(iv) If a smaller warning sign is used with "DANGER" and "PELIGRO" in letters at least 7/8 inch in height and the remaining letters at least 1/2 inch in height and a red circle at least three inches in diameter containing an upraised hand and a stern face, the signs must be posted no farther than 50 feet apart around the perimeter of the treated area in addition to the locations specified in paragraphs (b)(3)(ii) or (b)(3)(iii) of this section.

(v) If a smaller sign is used with "DANGER" and "PELIGRO" in letters at least 7/16 inch in height and the remaining letters at least 1/4 inch in height and a red circle at least one and a half inches in diameter containing an upraised hand and a stern face, the signs must be posted no farther than 25 feet apart around the perimeter of the treated area in addition to the locations specified in paragraphs (b)(3)(ii) or (b)(3)(iii) of this section.

(vi) A sign with "DANGER" and "PELIGRO" in letters less than 7/16 inch in height or with any words in letters less than 1/4 inch in height or a red circle smaller than one and a half inches in diameter containing an upraised hand and a stern face will not satisfy the requirements of the rule.

(c) *Oral warnings—Requirement.* If oral notification is required pursuant to paragraph (a) of this section, the agricultural employer must provide oral warnings to workers in a manner that the workers can understand. If a worker will be on the establishment when an application begins, the warning must be given before the application begins. If a worker arrives on the establishment while an application is taking place or a restricted-entry interval for a pesticide application is in effect, the warning must be given at the beginning of the worker's work period. The warning must include all of the following:

(1) The location(s) and description of any treated area(s) subject to the entry restrictions during and after application specified in §§ 170.405 and 170.407.

(2) The dates and times during which entry is restricted in any treated area(s) subject to the entry restrictions during and after application specified in §§ 170.405 and 170.407.

(3) Instructions not to enter the treated area or an application exclusion zone during application, and that entry to the treated area is not allowed until the restricted-entry interval has expired and all treated area warning signs have been removed or covered, except for entry permitted by § 170.603 of this part.

§ 170.411 Decontamination supplies for workers.

(a) *Requirement.* The agricultural employer must provide

decontamination supplies for routine washing and emergency decontamination in accordance with this section for any worker on an agricultural establishment who is performing an activity in an area where a pesticide was applied and who contacts anything that has been treated with the pesticide, including, but not limited to, soil, water, and plants.

(b) *Materials and quantities.* The decontamination supplies required in paragraph (a) of this section must include at least 1 gallon of water per worker at the beginning of each worker's work period for routine washing and emergency decontamination, soap, and single-use towels. The supplies must meet all of the following requirements:

(1) *Water.* At all times when this part requires agricultural employers to make water available to workers, the agricultural employer must ensure that it is of a quality and temperature that will not cause illness or injury when it contacts the skin or eyes or if it is swallowed. If a water source is used for mixing pesticides, it must not be used for decontamination, unless equipped with properly functioning valves or other mechanisms that prevent contamination of the water with pesticides, such as anti-backflow siphons, one-way or check valves, or an air gap sufficient to prevent contamination.

(2) *Soap and single-use towels.* The agricultural employer must provide soap and single-use towels for drying in quantities sufficient to meet the workers' reasonable needs. Hand sanitizing gels and liquids or wet towelettes do not meet the requirement for soap. Wet towelettes do not meet the requirement for single-use towels.

(c) *Timing.* (1) If any pesticide with a restricted-entry interval greater than four hours was applied, the decontamination supplies must be provided from the time workers first enter the treated area until at least 30 days after the restricted-entry interval expires.

(2) If the only pesticides applied in the treated area are products with restricted-entry intervals of four hours or less, the decontamination supplies must be provided from the time workers first enter the treated area until at least seven days after the restricted-entry interval expires.

(d) *Location.* The decontamination supplies must be located together outside any treated area or area subject to a restricted-entry interval, and must be reasonably accessible to the workers. The decontamination supplies must not be more than 1/4 mile from where workers are working, except that where workers are working more than 1/4 mile from the nearest place of vehicular access or more than 1/4 mile from any non-treated area, the decontamination supplies may be at the nearest place of vehicular access outside any treated area or area subject to a restricted-entry interval.

■ 7. Subpart F is added to part 170 to read as follows:

Subpart F—Requirements for Protection of Agricultural Pesticide Handlers

Sec.

§ 170.501 Training requirements for handlers.
§ 170.503 Knowledge of labeling, application-specific, and establishment-specific information for handlers.
§ 170.505 Requirements during applications to protect handlers, workers, and other persons.
§ 170.507 Personal protective equipment.
§ 170.509 Decontamination and eye flushing supplies for handlers.

§ 170.501 Training requirements for handlers.

(a) *General requirement.* Before any handler performs any handler activity involving a pesticide product, the handler employer must ensure that the handler has been trained in accordance with this section within the last 12 months, except as provided in paragraph (b) of this section.

(b) *Exceptions.* The following handlers need not be trained under this section:

(1) A handler who is currently certified as an applicator of restricted use pesticides under part 171 of this chapter.

(2) A handler who is certified or licensed as a crop advisor by a program acknowledged as appropriate in writing by EPA or the State or Tribal agency responsible for pesticide enforcement, provided that a requirement for such certification or licensing is pesticide safety training that includes all the topics set out in § 170.501(c)(2) or § 170.501(c)(3) as applicable depending on the date of training.

(c) *Training programs.* (1) Pesticide safety training must be presented to handlers either orally from written materials or audio-visually, at a location that is reasonably free from distraction and conducive to training. All training materials must be EPA-approved. The training must be presented in a manner that the handlers can understand, such as through a translator. The training must be conducted by a person who meets the handler trainer requirements of paragraph (c)(4) of this section, and who must be present during the entire training program and must respond to handlers' questions.

(2) The pesticide safety training materials must include, at a minimum, all of the following topics:

(i) Format and meaning of information contained on pesticide labels and in 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 appropriate use of personal protective equipment.

(ix) Prevention, recognition, and first aid treatment of heat-related illness.

(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 about taking pesticides or pesticide containers home.

(xiii) Requirements of this subpart that must be followed by handler employers for the protection of handlers and other persons, including the prohibition against applying pesticides in a manner that will cause contact with workers or other persons, the requirement to use personal protective equipment, the provisions for training and decontamination, and the protection against retaliatory acts.

(3) EPA intends to make available to the public training materials that may be used to conduct training conforming to the requirements of this section. Within 180 days after a notice of availability of such training materials appears in the **Federal Register**, but no earlier than January 1, 2018, training programs required under this section must include, at a minimum, all of the topics listed in § 170.501(c)(3)(i)–(xiv) instead of the points listed in § 170.501(c)(2)(i)–(xiii).

(i) All the topics required by § 170.401(c)(3).

(ii) Information on proper application and use of pesticides.

(iii) Handlers must follow the portions of the labeling applicable to the safe use of the pesticide.

(iv) Format and meaning of information contained on pesticide labels and in labeling applicable to the safe use of the pesticide.

(v) Need for and appropriate use and removal of all personal protective equipment.

(vi) How to recognize, prevent, and provide first aid treatment for heat-related illness.

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

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

(ix) Handlers must not apply pesticides in a manner that results in contact with workers or other persons.

(x) The responsibility of handler employers to provide handlers with information and protections designed to reduce work-related pesticide exposures and illnesses. This includes providing, cleaning, maintaining, storing, and ensuring proper use of all required personal protective equipment; providing decontamination supplies; and providing specific information about pesticide use and labeling information.

(xi) Handlers must suspend a pesticide application if workers or other persons are in the application exclusion zone.

(xii) Handlers must be at least 18 years old.

(xiii) The responsibility of handler employers to ensure handlers have received respirator fit-testing, training and medical evaluation if they are required to wear a respirator by the product labeling.

(xiv) The responsibility of agricultural employers to post treated areas as required by this rule.

(4) The person who conducts the training must have one of the following qualifications:

(i) Be designated as a trainer of certified applicators or pesticide handlers by EPA or the State or Tribal agency responsible for pesticide enforcement.

(ii) Have completed an EPA-approved pesticide safety train-the-trainer program for trainers of handlers.

(iii) Be currently certified as an applicator of restricted use pesticides under part 171 of this chapter.

(d) *Recordkeeping.* (1) Handler employers must maintain records of training for handlers employed by their establishment for two years after the date of the training. The records must be maintained on the establishment and must include all of the following information:

(i) The trained handler's printed name and signature.

(ii) The date of the training.

(iii) Information identifying which EPA-approved training materials were used.

(iv) The trainer's name and documentation showing that the trainer met the requirements of § 170.501(c)(4) at the time of training.

(v) The handler employer's name.

(2) The handler employer must, upon request by a handler trained on the establishment, provide to the handler a copy of the record of the training that contains the information required under § 170.501(d)(1).

§ 170.503 Knowledge of labeling, application-specific, and establishment-specific information for handlers.

(a) *Knowledge of labeling and application-specific information.* (1) The handler employer must ensure that before any handler performs any handler activity involving a pesticide product, the handler either has read the portions of the labeling applicable to the safe use of the pesticide or has been informed in a manner the handler can understand of all labeling requirements and use directions applicable to the safe use of the pesticide.

(2) The handler employer must ensure that the handler has access to the applicable product labeling at all times during handler activities.

(3) The handler employer must ensure that the handler is aware of requirements for any entry restrictions, application exclusion zones and restricted-entry intervals as described in §§ 170.405 and 170.407 that may apply based on the handler's activity.

(b) *Knowledge of establishment-specific information.* Before any handler performs any handler activity on an agricultural establishment where within the last 30 days a pesticide product has been used, or a restricted-entry interval for such pesticide has been in effect, the handler employer must ensure that the handler has been informed, in a manner the handler can understand, all of the following establishment-specific information:

(1) The location of pesticide safety information required by § 170.311(a).

(2) The location of pesticide application and hazard information required by § 170.311(b).

(3) The location of decontamination supplies required by § 170.509.

§ 170.505 Requirements during applications to protect handlers, workers, and other persons.

(a) *Prohibition from contacting workers and other persons with pesticides during application.* The handler employer and the handler must ensure that no pesticide is applied so as to contact, directly or through drift, any worker or other person, other than an appropriately trained and equipped handler involved in the application.

(b) *Suspending applications.* After January 1, 2018, the handler performing the application must immediately suspend a pesticide application if any worker or other person, other than an appropriately trained and equipped handler involved in the application, is in the application exclusion zone described in § 170.405(a)(1) or the area specified in column B of the Table in § 170.405(b)(4).

(c) *Handlers using highly toxic pesticides.* The handler employer must ensure that any handler who is performing any handler activity with a pesticide product that has the skull-and-crossbones symbol on the front panel of the pesticide product label is monitored visually or by voice communication at least every two hours.

(d) *Fumigant applications in enclosed space production.* The handler employer must ensure all of the following:

(1) Any handler in an enclosed space production area during a fumigant application maintains continuous visual or voice contact with another handler stationed immediately outside of the enclosed space.

(2) The handler stationed outside the enclosed space has immediate access to and uses the personal protective equipment required by the fumigant labeling for applicators in the event that entry becomes necessary for rescue.

§ 170.507 Personal protective equipment.

(a) *Handler responsibilities.* Any person who performs handler activities involving a pesticide product must use the clothing and personal protective equipment specified on the pesticide product labeling for use of the product, except as provided in § 170.607 of this part.

(b) *Employer responsibilities for providing personal protective equipment.* The handler employer must provide to the handler the personal protective equipment required by the pesticide product labeling in accordance with this section. The handler employer must ensure that the personal protective equipment is clean and in proper operating condition. For the purposes of this section, long-sleeved shirts, short-sleeved shirts, long pants, short pants, shoes, and socks are not considered personal protective equipment, although such work clothing must be worn if required by the pesticide product labeling.

(1) If the pesticide product labeling requires that "chemical-resistant" personal protective equipment be worn, it must be made of material that allows no measurable movement of the

pesticide being used through the material during use.

(2) If the pesticide product labeling requires that "waterproof" personal protective equipment be worn, it must be made of material that allows no measurable movement of water or aqueous solutions through the material during use.

(3) If the pesticide product labeling requires that a "chemical-resistant suit" be worn, it must be a loose-fitting, one- or two-piece chemical-resistant garment that covers, at a minimum, the entire body except head, hands, and feet.

(4) If the pesticide product labeling requires that "coveralls" be worn, they must be loose-fitting, one- or two-piece garments that cover, at a minimum, the entire body except head, hands, and feet.

(5) Gloves must be the type specified on the pesticide product labeling.

(i) Gloves made of leather, cotton, or other absorbent materials may not be worn while performing handler activities unless gloves made of these materials are listed as acceptable for such use on the pesticide product labeling.

(ii) Separable glove liners may be worn beneath chemical-resistant gloves, unless the pesticide product labeling specifically prohibits their use. Separable glove liners are defined as separate glove-like hand coverings, made of lightweight material, with or without fingers. Work gloves made from lightweight cotton or poly-type material are considered to be glove liners if worn beneath chemical-resistant gloves. Separable glove liners may not extend outside the chemical-resistant gloves under which they are worn. Chemical-resistant gloves with non-separable absorbent lining materials are prohibited.

(iii) If used, separable glove liners must be discarded immediately after a total of no more than 10 hours of use or within 24 hours of when first put on, whichever comes first. The liners must be replaced immediately if directly contacted by pesticide. Used glove liners must not be reused. Contaminated liners must be disposed of in accordance with any Federal, State, or local regulations.

(6) If the pesticide product labeling requires that "chemical-resistant footwear" be worn, one of the following types of footwear must be worn:

(i) Chemical-resistant shoes.

(ii) Chemical-resistant boots.

(iii) Chemical-resistant shoe coverings worn over shoes or boots.

(7) If the pesticide product labeling requires that "protective eyewear" be worn, one of the following types of eyewear must be worn:

(i) Goggles.

(ii) Face shield.

(iii) Safety glasses with front, brow, and temple protection.

(iv) Full-face respirator.

(8) If the pesticide product labeling requires that a "chemical-resistant apron" be worn, a chemical-resistant apron that covers the front of the body from mid-chest to the knees must be worn.

(9) If the pesticide product labeling requires that "chemical-resistant headgear" be worn, it must be either a chemical-resistant hood or a chemical-resistant hat with a wide brim.

(10) The respirator specified by the pesticide product labeling must be used. Whenever a respirator is required by the pesticide product labeling, the handler employer must ensure that the requirements of paragraphs (b)(10)(i) through (iii) of this section are met before the handler performs any handler activity where the respirator is required to be worn. The handler employer must maintain for two years, on the establishment, records documenting the completion of the requirements of paragraphs (b)(10)(i) through (iii) of this section.

(i) Handler employers must provide handlers with fit testing using the respirator specified on the pesticide product labeling in a manner that conforms to the provisions of 29 CFR 1910.134.

(ii) Handler employers must provide handlers with training in the use of the respirator specified on the pesticide product labeling in a manner that conforms to the provisions of 29 CFR 1910.134(k)(1)(i) through(vi).

(iii) Handler employers must provide handlers with a medical evaluation by a physician or other licensed health care professional that conforms to the provisions of 29 CFR 1910.134 to ensure the handler's physical ability to safely wear the respirator specified on the pesticide product labeling.

(c) *Use of personal protective equipment.* (1) The handler employer must ensure that personal protective equipment is used correctly for its intended purpose and is used according to the manufacturer's instructions.

(2) The handler employer must ensure that, before each day of use, all personal protective equipment is inspected for leaks, holes, tears, or worn places, and any damaged equipment is repaired or discarded.

(d) *Cleaning and maintenance.* (1) The handler employer must ensure that all personal protective equipment is cleaned according to the manufacturer's instructions or pesticide product labeling instructions before each day of reuse. In the absence of any such instructions, it must be washed thoroughly in detergent and hot water.

(2) If any personal protective equipment cannot or will not be cleaned properly, the handler employer must ensure the contaminated personal protective equipment is made unusable as apparel or is made unavailable for further use by employees or third parties. The contaminated personal protective equipment must be disposed of in accordance with any applicable laws or regulations. Coveralls or other absorbent materials that have been drenched or heavily contaminated with a pesticide that has the signal word "DANGER" or "WARNING" on the label must not be reused and must be disposed of as specified in this paragraph. Handler employers must ensure that any person who handles contaminated personal protective equipment described in this paragraph wears the gloves specified on the pesticide product labeling for mixing and loading the product(s) comprising the contaminant(s) on the equipment. If two or more pesticides are included in the contaminants, the gloves worn must meet the requirements for mixing and loading all of the pesticide products.

(3) The handler employer must ensure that contaminated personal protective equipment is kept separate from non-contaminated personal protective equipment, other clothing or laundry and washed separately from any other clothing or laundry.

(4) The handler employer must ensure that all washed personal protective equipment is dried thoroughly before being stored or reused.

(5) The handler employer must ensure that all clean personal protective equipment is stored separately from personal clothing and apart from pesticide-contaminated areas.

(6) The handler employer must ensure that when filtering facepiece respirators are used, they are replaced when one of the following conditions is met:

(i) When breathing resistance becomes excessive.

(ii) When the filter element has physical damage or tears.

(iii) According to manufacturer's recommendations or pesticide product labeling, whichever is more frequent.

(iv) In the absence of any other instructions or indications of service life, at the end of eight hours of cumulative use.

(7) The handler employer must ensure that when gas- or vapor-removing respirators are used, the gas- or vapor-removing canisters or cartridges are

replaced before further respirator use when one of the following conditions is met:

(i) At the first indication of odor, taste, or irritation.

(ii) When the maximum use time is reached as determined by a change schedule conforming to the provisions of 29 CFR 1910.134(d)(3)(iii)(B)(2).

(iii) When breathing resistance becomes excessive.

(iv) When required according to manufacturer's recommendations or pesticide product labeling instructions, whichever is more frequent.

(v) In the absence of any other instructions or indications of service life, at the end of eight hours of cumulative use.

(8) The handler employer must inform any person who cleans or launders personal protective equipment of all the following:

(i) That such equipment may be contaminated with pesticides and there are potentially harmful effects from exposure to pesticides.

(ii) The correct way(s) to clean personal protective equipment and how to protect themselves when handling such equipment.

(iii) Proper decontamination procedures that should be followed after handling contaminated personal protective equipment.

(9) The handler employer must ensure that handlers have a place(s) away from pesticide storage and pesticide use areas where they may do all of the following:

(i) Store personal clothing not worn during handling activities.

(ii) Put on personal protective equipment at the start of any exposure period.

(iii) Remove personal protective equipment at the end of any exposure period.

(10) The handler employer must not allow or direct any handler to wear home or to take home employer-provided personal protective equipment contaminated with pesticides.

(e) *Heat-related illness.* Where a pesticide's labeling requires the use of personal protective equipment for a handler activity, the handler employer must take appropriate measures to prevent heat-related illness.

§ 170.509 Decontamination and eye flushing supplies for handlers.

(a) *Requirement.* The handler employer must provide decontamination and eye flushing supplies in accordance with this section for any handler that is performing any handler activity or removing personal protective equipment at the place for changing required by § 170.507(d)(9).

(b) *General conditions.* The decontamination supplies required in paragraph (a) of this section must include: at least three gallons of water per handler at the beginning of each handler's work period for routine washing and potential emergency decontamination; soap; single-use towels; and clean clothing for use in an emergency. The decontamination and eye flushing supplies required in paragraph (a) of this section must meet all of the following requirements:

(1) *Water.* At all times when this section requires handler employers to make water available to handlers for routine washing, emergency decontamination or eye flushing, the handler employer must ensure that it is of a quality and temperature that will not cause illness or injury when it contacts the skin or eyes or if it is swallowed. If a water source is used for mixing pesticides, it must not be used for decontamination or eye flushing supplies, unless equipped with properly functioning valves or other mechanisms that prevent contamination of the water with pesticides, such as anti-backflow siphons, one-way or check valves, or an air gap sufficient to prevent contamination.

(2) *Soap and single-use towels.* The handler employer must provide soap and single-use towels for drying in quantities sufficient to meet the handlers' needs. Hand sanitizing gels and liquids or wet towelettes do not meet the requirement for soap. Wet towelettes do not meet the requirement for single-use towels.

(3) *Clean change of clothing.* The handler employer must provide one clean change of clothing, such as coveralls, for use in an emergency.

(c) *Location.* The decontamination supplies must be located together outside any treated area or area subject to a restricted-entry interval, and must be reasonably accessible to each handler during the handler activity. The decontamination supplies must not be more than 1/4 mile from the handler, except that where the handler activity is more than 1/4 mile from the nearest place of vehicular access or more than 1/4 mile from any non-treated area, the decontamination supplies may be at the nearest place of vehicular access outside any treated area or area subject to a restricted-entry interval.

(1) *Mixing sites.* Decontamination supplies must be provided at any mixing site.

(2) *Exception for pilots.* Decontamination supplies for a pilot who is applying pesticides aerially must be in the aircraft or at the aircraft loading site.

(3) *Exception for treated areas.* The decontamination supplies must be outside any treated area or area subject to a restricted-entry interval, unless the soap, single-use towels, water and clean change of clothing are protected from pesticide contamination in closed containers.

(d) *Emergency eye-flushing.* (1) Whenever a handler is mixing or loading a pesticide product whose labeling requires protective eyewear for handlers, or is mixing or loading any pesticide using a closed system operating under pressure, the handler employer must provide at each mixing/loading site immediately available to the handler, at least one system that is capable of delivering gently running water at a rate of least 0.4 gallons per minute for at least 15 minutes, or at least six gallons of water in containers suitable for providing a gentle eye-flush for about 15 minutes.

(2) Whenever a handler is applying a pesticide product whose labeling requires protective eyewear for handlers, the handler employer must provide at least one pint of water per handler in portable containers that are immediately available to each handler.

■ 8. Subpart G is added to part 170 to read as follows:

Subpart G—Exemptions, Exceptions and Equivalency

Sec.

§ 170.601 Exemptions.
§ 170.603 Exceptions for entry by workers during restricted-entry intervals.
§ 170.605 Agricultural employer responsibilities to protect workers entering treated areas during a restricted-entry interval.
§ 170.607 Exceptions to personal protective equipment requirements specified on pesticide product labeling.
§ 170.609 Equivalency requests.

§ 170.601 Exemptions.

(a) *Exemption for owners of agricultural establishments and their immediate families.* (1) On any agricultural establishment where a majority of the establishment is owned by one or more members of the same immediate family, the owner(s) of the establishment are not required to provide the protections of the following provisions to themselves or members of their immediate family when they are performing handling activities or tasks related to the production of agricultural plants that would otherwise be covered by this part on their own agricultural establishment.

(i) Section 170.309(c).

(ii) Section 170.309(f) through (j).

(iii) Section 170.311.

(iv) Section 170.401.
(v) Section 170.403.
(vi) Section 170.409.
(vii) Sections 170.411 and 170.509.
(viii) Section 170.501.
(ix) Section 170.503.
(x) Section 170.505(c) and (d).
(xi) Section 170.507(c) through (e).
(xii) Section 170.605(a) through (c) and (e) through (j).

(2) The owners of agricultural establishments must provide all of the applicable protections required by this part for any employees or other persons on the establishment that are not members of their immediate family.

(b) Exemption for certified crop advisors. Certified crop advisors may make their own determination for the appropriate personal protective equipment for entry into a treated area during a restricted-entry interval and substitute their self-determined set of personal protective equipment for the labeling-required personal protective equipment, and the requirements of §§ 170.309(e), 170.309(f), 170.313(k), 170.503(a), 170.507 and 170.509 of this part do not apply to certified crop advisors provided the application is complete and all of the following conditions are met:

(1) The crop advisor is certified or licensed as a crop advisor by a program acknowledged as appropriate in writing by EPA or a State or Tribal agency responsible for pesticide enforcement.

(2) The certification or licensing program requires pesticide safety training that includes all the information in § 170.501(c)(2) or § 170.501(c)(3) as applicable depending on the date of training.

(3) The crop advisor who enters a treated area during a restricted-entry interval only performs crop advising tasks while in the treated area.

§ 170.603 Exceptions for entry by workers during restricted-entry intervals.

An agricultural employer may direct workers to enter treated areas where a restricted-entry interval is in effect to perform certain activities as provided in this section, provided that the agricultural employer ensures all of the applicable conditions of this section and § 170.605 of this part are met.

(a) *Exception for activities with no contact.* A worker may enter a treated area during a restricted-entry interval if the agricultural employer ensures that all of the following conditions are met:

(1) The worker will have no contact with anything that has been treated with the pesticide to which the restricted-entry interval applies, including, but not limited to, soil, water, air, or surfaces of plants. This exception does not allow workers to perform any activities that involve contact with treated surfaces even if workers are wearing personal protective equipment.

(2) No such entry is allowed until any inhalation exposure level listed in the pesticide product labeling has been reached or any ventilation criteria required by § 170.405(b)(3) or the pesticide product labeling have been met.

(b) *Exception for short-term activities.* A worker may enter a treated area during a restricted-entry interval for short-term activities, if the agricultural employer ensures that all of the following requirements are met:

(1) No hand labor activity is performed.

(2) The time in treated areas where a restricted-entry interval is in effect does not exceed one hour in any 24-hour period for any worker.

(3) No such entry is allowed during the first 4 hours after the application ends.

(4) No such entry is allowed until any inhalation exposure level listed in the pesticide product labeling has been reached or any ventilation criteria required by § 170.405(b)(3) or the pesticide product labeling have been met.

(c) *Exception for an agricultural emergency.* (1) An agricultural emergency means a sudden occurrence or set of circumstances that the agricultural employer could not have anticipated and over which the agricultural employer has no control, that requires entry into a treated area during a restricted-entry interval, and when no alternative practices would prevent or mitigate a substantial economic loss. A substantial economic loss means a loss in profitability greater than that which would be expected based on the experience and fluctuations of crop yields in previous years. Only losses caused by the agricultural emergency specific to the affected site and geographic area are considered. Losses resulting from mismanagement cannot be included when determining whether a loss is substantial.

(2) A worker may enter a treated area where a restricted-entry interval is in effect in an agricultural emergency to perform tasks necessary to mitigate the effects of the agricultural emergency, including hand labor tasks, if the agricultural employer ensures that all the following criteria are met:

(i) The State department of agriculture, or the State or Tribal agency responsible for pesticide enforcement declares an agricultural emergency that applies to the treated area, or agricultural employer has determined that the circumstances within the treated area are the same as circumstances the State department of agriculture, or the State or Tribal agency responsible for pesticide enforcement has previously determined would constitute an agricultural emergency.

(ii) The agricultural employer determines that the agricultural establishment is subject to the circumstances that result in an agricultural emergency meeting the criteria of paragraph (c)(1) of this section.

(iii) If the labeling of any pesticide product applied to the treated area requires workers to be notified of the location of treated areas by both posting and oral notification, then the agricultural employer must ensure that no individual worker spends more than four hours out of any 24-hour period in treated areas where such a restricted-entry interval is in effect.

(iv) No such entry is allowed during the first 4 hours after the application ends.

(v) No such entry is allowed until any inhalation exposure level listed in the pesticide product labeling has been reached or any ventilation criteria required by § 170.405(b)(3) or the pesticide product labeling have been met.

(d) *Exceptions for limited contact and irrigation activities.* A worker may enter a treated area during a restricted-entry interval for limited contact or irrigation activities, if the agricultural employer ensures that all of the following requirements are met:

(1) No hand labor activity is performed.

(2) No worker is allowed in the treated area for more than eight hours in a 24-hour period.

(3) No such entry is allowed during the first 4 hours after the application ends.

(4) No such entry is allowed until any inhalation exposure level listed in the pesticide product labeling has been reached or any ventilation criteria required by § 170.405(b)(3) or the pesticide product labeling have been met.

(5) The task is one that, if not performed before the restricted-entry interval expires, would cause substantial economic loss, and there are no alternative tasks that would prevent substantial loss.

(6) With the exception of irrigation tasks, the need for the task could not have been foreseen.

(7) The worker has no contact with pesticide-treated surfaces other than

minimal contact with feet, lower legs, hands, and forearms.

(8) The labeling of the pesticide product that was applied does not require that workers be notified of the location of treated areas by both posting and oral notification.

§ 170.605 Agricultural employer responsibilities to protect workers entering treated areas during a restricted-entry interval.

If an agricultural employer directs a worker to perform activities in a treated area where a restricted-entry interval is in effect, all of the following requirements must be met:

(a) The agricultural employer must ensure that the worker is at least 18 years old.

(b) Prior to early entry, the agricultural employer must provide to each early-entry worker the information described in paragraphs (b)(1) through (8) of this section. The information must be provided orally in a manner that the worker can understand.

(1) Location of early-entry area where work activities are to be performed.

(2) Pesticide(s) applied.

(3) Dates and times that the restricted-entry interval begins and ends.

(4) Which exception in § 170.603 is the basis for the early entry, and a description of tasks that may be performed under the exception.

(5) Whether contact with treated surfaces is permitted under the exception.

(6) Amount of time the worker is allowed to remain in the treated area.

(7) Personal protective equipment required by the pesticide product labeling for early entry.

(8) Location of the pesticide safety information required by § 170.311(a) and the location of the decontamination supplies required by § 170.605(h).

(c) Prior to early entry, the agricultural employer must ensure that each worker either has read the applicable pesticide product labeling or has been informed, in a manner that the worker can understand, of all labeling requirements and statements related to human hazards or precautions, first aid, and user safety.

(d) The agricultural employer must ensure that each worker who enters a treated area during a restricted-entry interval is provided the personal protective equipment specified in the pesticide product labeling for early entry. The agricultural employer must ensure that the worker uses the personal protective equipment as intended according to manufacturer's instructions and follows any other applicable requirements on the pesticide product labeling. Personal protective equipment must conform to the standards in § 170.507(b)(1) through (9).

(e) The agricultural employer must maintain the personal protective equipment in accordance with § 170.507(c) and (d).

(f) The agricultural employer must ensure that no worker is allowed or directed to wear personal protective equipment without implementing measures sufficient to prevent heat-related illness and that each worker is instructed in the prevention, recognition, and first aid treatment of heat-related illness.

(g) The agricultural employer must instruct each worker on the proper use and removal of the personal protective equipment, and as appropriate, on its cleaning, maintenance and disposal. The agricultural employer must not allow or direct any worker to wear home or to take home employer-provided personal protective equipment contaminated with pesticides.

(h) During any early-entry activity, the agricultural employer must provide decontamination supplies in accordance with § 170.509, except the decontamination supplies must be outside any area being treated with pesticides or subject to a restricted-entry interval, unless the decontamination supplies would otherwise not be reasonably accessible to workers performing early-entry tasks.

(i) If the pesticide product labeling of the product applied requires protective eyewear, the agricultural employer must provide at least one pint of water per worker in portable containers for eyeflushing that is immediately available to each worker who is performing early-entry activities.

(j) At the end of any early-entry activities the agricultural employer must provide, at the site where the workers remove personal protective equipment, soap, single-use towels and at least three gallons of water per worker so that the workers may wash thoroughly.

§ 170.607 Exceptions to personal protective equipment requirements specified on pesticide product labeling.

(a) *Body protection.* (1) A chemical-resistant suit may be substituted for coveralls. If a chemical-resistant suit is substituted for coveralls, any labeling requirement for an additional layer of clothing beneath the coveralls is waived.

(2) A chemical-resistant suit may be substituted for coveralls and a chemical-resistant apron.

(b) *Boots.* If chemical-resistant footwear with sufficient durability and a tread appropriate for wear in rough terrain is not obtainable, then leather boots may be worn in such terrain.

(c) *Gloves.* If chemical-resistant gloves with sufficient durability and suppleness are not obtainable, then during activities with plants with sharp thorns, leather gloves may be worn over chemical-resistant glove liners. However, once leather gloves are worn for this use, thereafter they must be worn only with chemical-resistant liners and they must not be worn for any other use.

(d) *Closed systems.*(1) When pesticides are being mixed or loaded using a closed system that meets all of the requirements in paragraph (d)(2) of this section, and the handler employer meets the requirements of paragraph (d)(3) of this section, the following exceptions to labeling-specified personal protective equipment are permitted:

(i) Handlers using a closed system to mix or load pesticides with a signal word of "DANGER" or "WARNING" may substitute a long-sleeved shirt, long pants, shoes and socks, chemical-resistant apron, protective eyewear, and any protective gloves specified on the labeling for handlers for the labeling-specified personal protective equipment.

(ii) Handlers using a closed system to mix or load pesticides other than those specified in paragraph (d)(1)(i) of this section may substitute protective eyewear, long-sleeved shirt, long pants, and shoes and socks for the labeling-specified personal protective equipment.

(2) The exceptions of paragraph (d)(1) of this section apply only in the following situations:

(i) Where the closed system removes the pesticide from its original container and transfers the pesticide product through connecting hoses, pipes and couplings that are sufficiently tight to prevent exposure of handlers to the pesticide product, except for the negligible escape associated with normal operation of the system.

(ii) When loading intact, sealed, water soluble packaging into a mixing tank or system. If the integrity of a water soluble packaging is compromised (for example, if the packaging is dissolved, broken, punctured, torn, or in any way allows its contents to escape), it is no longer a closed system and the labeling-specified personal protective equipment must be worn.

(3) The exceptions of paragraph (d)(1) of this section apply only where the handler employer has satisfied the requirements of § 170.313 and all of the following conditions:

(i) Each closed system must have written operating instructions that are clearly legible and include: Operating procedures for use, including the safe removal of a probe; maintenance, cleaning and repair; known restrictions or limitations relating to the system, such as incompatible pesticides, sizes (or types) of containers or closures that cannot be handled by the system; any limits on the ability to measure a pesticide; and special procedures or limitations regarding partially-filled containers.

(ii) The written operating instructions for the closed system must be available at the mixing or loading site and must be made available to any handlers who use the system.

(iii) Any handler operating the closed system must be trained in its use and operate the closed system in accordance with its written operating instructions.

(iv) The closed system must be cleaned and maintained as specified in the written operating instructions and as needed to make sure the system functions properly.

(v) All personal protective equipment specified in the pesticide product labeling is immediately available to the handler for use in an emergency.

(vi) Protective eyewear must be worn when using closed systems operating under pressure.

(e) *Enclosed cabs.* (1) If a handler applies a pesticide from inside a vehicle's enclosed cab, and if the conditions listed in paragraph (e)(2) of this section are met, exceptions to the personal protective equipment requirements specified on the product labeling for applicators are permitted as provided in paragraph (e)(3) of this section.

(2) All of the personal protective equipment required by the pesticide product labeling for applicators must be immediately available and stored in a sealed container to prevent contamination. Handlers must wear the applicator personal protective equipment required by the pesticide product labeling if they exit the cab within a treated area during application or when a restricted-entry interval is in effect. Once personal protective equipment is worn in a treated area, it must be removed before reentering the cab to prevent contamination of the cab.

(3) Handlers may substitute a long-sleeved shirt, long pants, shoes and socks for the labeling-specified personal protective equipment for skin and eye protection. If a filtering facepiece respirator (NIOSH approval number prefix TC–84A) or dust/mist filtering respirator is required by the pesticide product labeling for applicators, then that respirator need not be worn inside the enclosed cab if the enclosed cab has a properly functioning air ventilation system which is used and maintained in accordance with the manufacture's written operating instructions. If any other type of respirator is required by the pesticide labeling for applicators, then that respirator must be worn.

(f) *Aerial applications*—(1) *Use of gloves.* The wearing of chemical-resistant gloves when entering or leaving an aircraft used to apply pesticides is optional, unless such gloves are required on the pesticide product labeling. If gloves are brought into the cockpit of an aircraft that has been used to apply pesticides, the gloves shall be kept in an enclosed container to prevent contamination of the inside of the cockpit.

(2) *Open cockpit.* Handlers applying pesticides from an open cockpit aircraft must use the personal protective equipment specified in the pesticide product labeling for use during application, except that chemical-resistant footwear need not be worn. A helmet may be substituted for chemical-resistant headgear. A helmet with a face shield lowered to cover the face may be substituted for protective eyewear.

(3) *Enclosed cockpit.* Persons occupying an enclosed cockpit may substitute a long-sleeved shirt, long pants, shoes, and socks for labeling-specified personal protective equipment.

(g) *Crop advisors.* (1) Provided the conditions of paragraphs (g)(2) through (g)(4) of this section are met, crop advisors and their employees entering treated areas to perform crop advising tasks while a restricted-entry interval is in effect may substitute either of the following sets of personal protective equipment for the personal protective equipment specified on the pesticide labeling for handler activities:

(i) The personal protective equipment specified on the pesticide product labeling for early entry.

(ii) Coveralls, shoes plus socks and chemical-resistant gloves made of any waterproof material, and eye protection if the pesticide product labeling applied requires protective eyewear for handlers.

(2) The application has been complete for at least four hours.

(3) No such entry is allowed until any inhalation exposure level listed in the pesticide product labeling has been reached or any ventilation criteria required by § 170.405(b)(3) or the pesticide product labeling have been met.

(4) The crop advisor or crop advisor employee who enters a treated area during a restricted-entry interval only performs crop advising tasks while in the treated area.

§ 170.609 Equivalency requests.

(a) States and Tribes that have promulgated worker protection regulations to protect agricultural workers and pesticide handlers from occupational pesticide exposure effective prior to January 1, 2016, have the option of requesting authority to continue implementing any provision(s) of the State's or Tribe's existing regulations that provides equivalent or greater protection in lieu of implementing any similar provision(s) in this part.

(b) States or Tribes must submit requests for the authority to continue implementing State or Tribal regulation provision(s) in lieu of any similar provision(s) in this part by *June 29, 2016.* The request must be in the form of a letter from the State or Tribe to EPA that includes all of the following:

(1) Identification of the provision(s) of this part for which the State or Tribe is requesting regulatory equivalency.

(2) Appropriate documentation establishing that the pertinent State or Tribal worker protection provision(s) provides environmental and human health protection that meets or exceeds the protections provided by the identified provision(s) in this part.

(3) Identification of any additional modifications to existing State or Tribal regulations that would be necessary in order to provide environmental and human health protection that meets or exceeds the similar provisions of this part, and an estimated timetable for the State or Tribe to effect these changes.

(4) The expected economic impact of requiring compliance with the requirement(s) of this part in comparison with compliance with the State or Tribal requirement(s), and an explanation of why it is important that employers subject to the State or Tribal authority comply with the State or Tribal requirement(s) in lieu of similar provision(s) in this part.

(5) The signature of the designated representative of the State or Tribal agency responsible for pesticide enforcement.

(c) EPA's Office of Pesticide Programs will review the State's or Tribe's letter and supporting materials and determine whether the State or Tribal provision(s) provide environmental and human health protection that meets or exceeds the comparable provision(s) of this part.

(d) EPA's Office of Pesticide Programs will inform the State or Tribe of its determination through a letter. The letter will either:

(1) Authorize the State or Tribe to continue implementing its worker protection regulatory provision(s) in lieu of the comparable provision(s) of this part; or

(2) Deny the State or Tribe authorization to continue implementing its worker protection regulatory provision(s) in lieu of the comparable provision(s) of this part and detail any reasons for declining authorization.

(e) *Subsequent revisions.* Any State or Tribe that has received authorization from EPA through the process outlined in this section to continue implementing its State or Tribal worker protection regulatory provision(s) must inform EPA by letter within six months of any revision to the State or Tribal worker protection laws or regulations. The letter must contain the same information outlined in paragraph (b) of this section. The State or Tribe may continue implementing provisions of its worker protection regulations identified under paragraph (b) of this section unless and until EPA informs the State or Tribe through a letter that EPA has determined that the State's or Tribe's worker protection regulations no longer provide environmental and human health protection that meets or exceeds the comparable provision(s) of this part based on the revisions.

[FR Doc. 2015–25970 Filed 10–30–15; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 171

[EPA–HQ–OPP–2011–0183; FRL–9956–70]

RIN 2070–AJ20

Pesticides; Certification of Pesticide Applicators

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

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

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

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

FOR FURTHER INFORMATION CONTACT: Kevin Keaney, Field and External Affairs Division (7506P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington DC 20460–0001; telephone number: (703) 305–5557; email address: *keaney.kevin@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Executive Summary

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

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

B. What is the purpose of the regulatory action?

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

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

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

- *Recertification.* EPA proposed establishing a maximum certification period of 3 years. The proposal also would have required applicators to earn a specific number of continuing education units (CEUs), based on their existing certification, to maintain their certification. The proposal defined a CEU as 50 minutes of active training time. The final rule establishes a maximum recertification period of 5 years. The final rule does not require applicators to complete a specific number of CEUs or hours of training in order to maintain their certification. Rather, the final rule establishes a framework for certifying authorities to develop a recertification program within their jurisdiction. The recertification program must ensure that applicators maintain a level of competency to use RUPs without causing unreasonable adverse effects to human health and the environment. EPA will approve recertification programs as part of its review of a certifying authority's certification plan.
- *Minimum age.* EPA proposed establishing a minimum age of 18 for private and commercial applicators, as well as for noncertified applicators working under their direct supervision. The final rule establishes a minimum age of 18 for private and commercial applicators. The final rule also establishes a minimum age of 18 for noncertified applicators working under the supervision of private and commercial applicators with a limited exception; the final rule establishes a minimum age of 16 for a noncertified applicator using agricultural RUPs under the supervision of a private applicator who is a member of the noncertified applicator's immediate family, with certain restrictions. The definition of "immediate family" in the final rule matches the definition of the same term in the revised Worker Protection Standard (WPS) (40 CFR 170.305).
- *Noncertified applicator qualifications.* EPA proposed requiring noncertified applicators to qualify as competent to use RUPs under the direct supervision of a certified applicator by completing pesticide safety training covering content outlined in the proposal. The proposal also included two alternative ways to qualify—completing pesticide safety training for handlers under the WPS, which covers many noncertified applicators in agriculture, or passing the exam for commercial applicators that covers core competency (but not a category exam). The proposal would have required certifying authorities either to adopt the proposed standards for noncertified applicators or to prohibit the use of RUPs by noncertified applicators. The

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

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

• *Categories of certification.* EPA proposed the addition of "application method-specific" categories (aerial application, soil fumigation, and non-soil fumigation) for both commercial and private applicators. The proposal would have required commercial applicators to be certified in at least one category before being eligible to obtain an application method-specific certification (*i.e.,* hold concurrent certifications in a pest control category (*e.g.,* turf and ornamental) and an application method-specific category (*e.g.,* soil fumigation). Under the proposal, private applicators would have needed to hold a valid private applicator certification in order to be eligible to obtain an application method-specific certification. EPA also proposed adding predator control categories for private and commercial applicators, with subcategories under each covering the use of sodium cyanide dispensed through a mechanical ejection device and sodium fluoroacetate dispensed through livestock protection collars. In the final rule, EPA has added categories for both private and commercial applicators covering aerial application, soil fumigation, non-soil fumigation, the use of sodium cyanide dispensed through a mechanical ejection device, and the use of sodium fluoroacetate dispensed through livestock protection collars. These are stand-alone certification categories and do not necessarily require concurrent certification in another existing category.

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

• *Implementation.* EPA proposed allowing certifying authorities two years from the effective date of the final rule to develop and submit a certification plan for EPA review and approval, and two years for EPA to review and approve certification plans. The proposal allowed certifying authorities that had submitted plans but had not yet received EPA approval to continue operating under their existing certification plan until EPA issued approval of the revised certification plan. The final rule adjusts the proposed implementation timeframe to provide additional flexibility. Existing certification plans approved by EPA before the effective date of the rule will remain in effect until three years after the effective date of the final rule; if a certifying authority submits an amended certification plan to EPA for approval within three years of the effective date of the final rule, its existing certification plan will remain in effect until EPA has reviewed and responded to the amended certification plan, but no longer than two years, unless EPA authorizes further extension in its approval of an amended certification plan. In its approval of an amended certification plan, EPA will specify how much longer the existing plan may remain in effect while the certifying authority prepares to implement its amended certification plan. EPA will base each certifying authority's implementation period on the particular circumstances of that jurisdiction and the requests from the certifying authority, but anticipates that most certifying authorities will be allowed two years from the date of EPA approval to fully implement their revised certification plans.

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

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

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

Category	Description	Location in the economic analysis
Monetized Benefits Avoided acute pesticide incidents.	$13.2 to $24.3 million/year from avoided acute pesticide incidents, not adjusted for underreporting of pesticide incidents.	Chapter 4.4.
Qualitative Benefits	• Willingness to pay to avoid acute effects of pesticide exposure beyond cost of treatment and loss of productivity. • Reduced latent effect of avoided acute pesticide exposure. • Reduced chronic effects from lower chronic pesticide exposure to workers, handlers, and farmworker families, including a range of illnesses such as Non-Hodgkins lymphoma, prostate cancer, Parkinson's disease, lung cancer, chronic bronchitis, and asthma. • Reduced harm to wildlife and non-target crops.	Chapter 4.2 & 4.5.
Total Costs	$31.3 million/year	Chapter 3.5.
Costs to Private Applicators	483,000 impacted; $8.6 million/year; average $25 per applicator	Chapter 3.5.
Costs to Commercial Applicators	421,000 impacted; $16.2 million/year; average $46 per applicator	Chapter 3.5.
Costs to States and Other Jurisdictions	68 impacted; $6.5 million/year	Chapter 3.5.

Category	Description	Location in the economic analysis
Small Business Impacts	No significant impact on a substantial number of small entities • The rule may affect over 800,000 small farms that use pesticides, although about half are unlikely to apply RUPs. • Impact less than 1% of the annual revenues for the average small entity.	Chapter 3.7.
Impact on Jobs	The rule will have a negligible effect on jobs and employment • Most private and commercial applicators are self-employed. • Incremental cost per applicator represents from 0.2 to 0.5 percent of the cost of a part-time employee.	Chapter 3.6.

II. General Information

A. Does this action apply to me?

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

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

B. What action is the Agency taking?

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

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

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

1. Private applicator competency standards. The final rule changes the standards of competency a private applicator must meet in order to be certified. The final rule expands the private applicator competency standards to include most of the general standards of competency for commercial applicators (also known as "core" competency), standards generally applicable to pesticide use in agriculture, and specific related regulations relevant to private applicators, such as the WPS. The final rule amends the options for determining private applicator competency by requiring the applicator to complete a training program or to pass a written exam that covers the specific competency standards in this rule. The final rule eliminates from the existing rule the non-reader certification option, which allows certification by oral exam to use a single product.

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

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

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

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

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

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

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

6. Indian country certification. The final rule offers three options for certification for applicators in Indian country. A Tribe may choose to allow persons holding currently valid certifications issued under one or more specified State, Tribal, or Federal agency certification plans to apply RUPs within the Tribe's Indian country, develop its own certification plan for certifying private and commercial applicators, or take no action, in which case EPA may, in consultation with the Tribe(s) affected, implement an EPA-administered certification plan within the Tribe's Indian country. EPA currently administers a Federal certification program covering Indian country not otherwise covered by a certification plan (Ref. 3) as well as a certification program specifically for Navajo Indian country (Ref. 4).

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

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

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

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

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

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

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

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

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

However, EPA recognizes that the benefits estimate is biased downward by an unknown degree. First, pesticide incidents, like many illnesses and accidents, are underreported because sufferers may not seek medical care, cases may not be correctly diagnosed, and correctly diagnosed cases may not be filed to the central reporting database. Also, many symptoms of pesticide poisoning, such as fatigue, nausea, rash, dizziness, and diarrhea, may be confused with other illnesses and may not be reported as related to pesticide exposure. Studies estimate that underreporting of pesticide exposure ranges from 20% to 95% (Refs. 5, 6, 7, 8, 9, 10, and 11). EPA included underreporting of pesticide incidents as a factor in the sensitivity analysis of the potential benefits of the final rule (Ref. 1), but based its estimate of the benefits on the rule on figures unadjusted for underreporting.

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

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

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

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

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

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

III. Introduction and Procedural History

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

FIFRA requires EPA to consider the benefits of pesticides as well as the potential risks. This consideration does not override EPA's responsibility to protect human health and the environment; rather, where a pesticide's use provides benefits, EPA must ensure that the product can be used without posing unreasonable adverse effects to human health or the environment. Some pesticides that are valuable to society but that might cause unreasonable adverse effects to human health or the environment if applied by inexperienced users are classified for restricted use (known as RUPs). Certified applicators have the knowledge, experience, and skills to understand and reliably follow the precise and often complex risk mitigation measures specified on the RUP labeling. Certification serves to ensure competency of applicators to use these RUPs, and therefore to protect the applicator, persons working under the direct supervision of the applicator, the general public, and the environment through judicious and appropriate use of RUPs.

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

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

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

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

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

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

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

IV. Context, Considerations, and Reasons for This Rulemaking

A. Context for This Rulemaking

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

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

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

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

The risks associated with products classified as RUPs require additional regulatory restrictions to ensure that when used they do not cause unreasonable adverse effects on human health or the environment. However, RUPs can be used without unreasonable adverse effects by properly competent and equipped applicators closely following labeling instructions. These products may only be applied by certified applicators who have demonstrated competency in the safe application of pesticides, including the ability to read and understand the complex labeling requirements, or persons working under their direct supervision. FIFRA requires EPA to develop standards for certification of applicators, 7 U.S.C. 136i(a)(1), and allows States to certify applicators under a certification plan approved by EPA. 7 U.S.C. 136i(a)(2).

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

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

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

Agriculture (USDA) regulations at 7 CFR 110.3.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- *Commercial applicators.* "Commercial applicator" is defined at 7 U.S.C. 136(e)(3). This group consists primarily of those who apply RUPs for hire, including applicators who perform agricultural pest control, structural pest control, lawn and turf care, and public health pest control.
- *Private applicators.* "Private applicator" is defined at 7 U.S.C. 136(e)(2). This group consists primarily of farmers or agricultural growers who apply RUPs to their own land to produce an agricultural commodity.
- *Noncertified applicators.* A noncertified applicator is a person who uses RUPs under the direct supervision of a certified applicator. The phrase "under the direct supervision of a certified applicator" is defined at 7 U.S.C. 136(e)(4).

The existing certification rule establishes requirements for submission and approval of State plans for the certification of applicators. Consistent with the provisions of FIFRA (7 U.S.C. 136i(a)(2)) and the State plan requirements in the existing rule, programs for the certification of applicators of RUPs are currently implemented by all States and most territories. (As used in FIFRA, the term State means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, the Trust Territory of the Pacific Islands, and American Samoa; the term State has the same meaning in this final rulemaking.) Certification programs are also carried out by four other Federal agencies under approved Federal agency plans. In addition, EPA has approved plans for four Tribes. EPA also directly administers a national certification plan for Indian country (Ref. 3) and has implemented a specific certification plan for the Navajo Nation (Ref. 4). The States, Tribes, and Federal agencies certify applicators in accordance with their EPA-approved certification plans (Ref. 18).

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

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

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

B. Considerations for Improving the Certification Rule

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

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

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

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

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

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

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

During the initial stages of the framing of this proposal, EPA's Federal advisory committee on pesticide issues, the Pesticide Program Dialogue Committee (PPDC), formed a workgroup in 2006 to provide feedback to EPA on different areas for change to the certification rule and the WPS. The workgroup had over 70 members representing a wide range of stakeholders. EPA shared with the workgroup suggestions for regulatory change identified through the National Assessment and solicited comments. The workgroup convened for a series of meetings and conference calls to get more information on specific parts of the regulation and areas where EPA was considering change, and provided feedback to EPA. The workgroup focused on evaluating possible changes under consideration by EPA by providing feedback from each member's or organization's perspective. Comments from the PPDC workgroup members have been compiled into a single document and posted in the docket (Ref. 28).

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

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

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

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

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

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

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

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

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

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

The Fair Labor Standard Act's (FLSA) child labor provisions, which are administered by DOL, permit children to work at younger ages in agricultural employment than in non-agricultural employment. Children under 16 years old are prohibited from doing hazardous tasks in agriculture, including handling or applying acutely toxic pesticides. 29 CFR 570.71(a)(9). DOL has established a general rule, applicable to most industries other than agriculture, that workers must be at least 18 years old to perform hazardous jobs. 29 CFR 570.120.

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

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

5. Retrospective regulatory review. On January 18, 2011, President Obama issued Executive Order 13563 (76 FR 3821, January 21, 2011), to direct each Federal agency to develop a plan, consistent with law and its resources and regulatory priorities, under which the agency would periodically review its existing significant regulations to determine whether any such regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives. The Executive Order also enumerates a number of principles and directives to guide agencies as they work to improve the Nation's regulatory system.

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

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

C. Reasons for This Rulemaking

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

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

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

ii. Specific application methods that require additional applicator competency. RUPs are applied using a variety of application methods. Some methods of application may require the applicator to have additional specific competencies to perform these applications in a way that minimizes risk to the applicator, bystander, and the environment. Spray applications, particularly spraying pesticides from an aircraft, may result in off-target drift of the pesticide. For example, a study estimates that 37% to 68% of acute pesticide-related illnesses in agricultural workers are caused by spray drift, including both ground-based and aerial spray applications (Ref. 32). In the 2008 REDs for soil fumigants (Ref. 33), EPA identified risks that required additional training for soil fumigant applicators, and specified labeling amendments requiring additional training in addition to the existing requirement for the applicator to be certified. The soil fumigant REDs also acknowledged that a specific certification category requiring demonstration of competency by passing a written exam related to applying fumigants to soil would be an acceptable alternative risk mitigation measure. EPA must ensure that applicators are competent to use RUPs in a manner that will not cause unreasonable adverse effects. Therefore, EPA is adding to the regulation categories for commercial and private applicators performing aerial application, soil fumigation, and non-soil fumigation.

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

In one of the most significant pesticide misuse cases from the mid-1990s, there was widespread misuse of the RUP methyl parathion, an insecticide used primarily on cotton and other outdoor agricultural crops, to control pests indoors. The improper use of this product by a limited number of applicators across several States led to the widespread contamination of hundreds of homes, significant pesticide exposures and adverse health effects for hundreds of homeowners and children, and clean-up costs of millions of dollars (Refs. 34 and 35). The incident resulted in one of the most significant and widespread pesticide exposure cases in EPA's history. In another incident, an applicator using the RUP aluminum phosphide caused the death of 2 young girls and made the rest of the family ill (see, *e.g., http://www.justice.gov/archive/usao/ut/news/2011/bugman%20plea.pdf* and *http://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?action=3&prosecution_summary_id=2249*). In 2015, improper use of methyl bromide in the Virgin Islands caused serious injury and long-term hospitalization of a four people (see, *e.g., https://www.justice.gov/opa/pr/terminix-companies-agree-pay-10-million-applying-restricted-use-pesticide-residences-us*). Also in 2015, fumigation with sulfuryl fluoride that did not follow proper procedures caused serious injury to a young boy (see, *e.g., https://www.justice.gov/usao-sdfl/pr/fumigation-company-and-two-individuals-pled-guilty-connection-illegal-pesticide*). Finally, several severe health incidents have resulted from the public getting access to RUPs that were unlawfully transferred into different containers (in one case, a soda bottle) that did not have the necessary labeling (Ref. 1).

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

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

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

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

Under the WPS, agricultural handlers must receive training that covers, among other topics, hazards associated with pesticide use; format and meaning of pesticide labeling; and proper pesticide use, transportation, storage, and disposal. 40 CFR 170.230(c)(4) and 170.501(c)(2). Agricultural handlers also must have access to the product labeling and any other information necessary to make the application without causing unreasonable adverse effects. EPA revised the WPS in 2015 to, among other changes, add content for agricultural handler training that covers proper use and removal of PPE and specific information on fitting and wearing respirators to ensure agricultural handlers are protected adequately and understand how to follow all relevant labeling provisions (Ref. 36).

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

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

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

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

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

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

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

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

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

To identify deaths and high severity incidents associated with use of RUPs, EPA consulted its Incident Data System (IDS). IDS is maintained by EPA's Office of Pesticide Programs (OPP) and incorporates data submitted by registrants under FIFRA section 6(a)(2), as well as other incidents reported by others directly to EPA. EPA's adverse effects reporting rule at 40 CFR part 159 allows the aggregation of individual events in some circumstances, meaning an incident with negative impacts to a number of individuals (*e.g.*, persons, livestock, birds, pollinators) could be reported as a single incident. In addition to incidents involving human health, IDS also collects information on claims of adverse effects from pesticides involving plants and animals (wild and domestic), as well as detections of pesticides in water. EPA used this information to identify incidents involving the use of RUPs that have ecological effects. While IDS reports may be broad in scope, the system does not consistently capture detailed information about incident events, such as occupational exposure circumstances or medical outcome, and the reports are not necessarily verified or investigated.

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

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

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

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

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

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

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

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

ii. Agricultural Health Study. The National Institutes of Health (National Cancer Institute and National Institute of Environmental Health Sciences) and EPA have sponsored the Agricultural Health Study since 1994. This long-term, prospective epidemiological study collects information from farmers who are certified applicators in Iowa and North Carolina to learn about the effects of environmental, occupational, dietary, and genetic factors on the health of the farmers, pesticide applicators, and their families. The study design involves gathering information over many years about the pesticide applicator and his or her family's health, occupational practices, lifestyle, and diet through mailed questionnaires and individual interviews. See *http://aghealth.nih.gov.*

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

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

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

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

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

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

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

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

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

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

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

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

V. Private Applicator Certification

A. Private Applicator Competency Standards

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

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

3. Comments and Responses

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

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

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

Many commenters noted that strengthening the competency standards for private applicators may increase the burden for certification, and as a result private applicators who do not use RUPs may forego certification. They assert that this would result in people using non-RUPs without any training or competency in safe pesticide use.

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

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

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

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

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

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

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

A commenter noted that the proposed requirement for private applicators to demonstrate knowledge of specific agricultural pests would be burdensome. The commenter noted that there are a variety of pests that could affect agriculture and knowledge of all would not make an applicator competent. The commenter questioned whether EPA or each State would determine what pests to include.

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

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

EPA does not agree with commenters who argue that private applicators using RUPs should not be required to meet general competency standards with regards to safe use of pesticides that are similar to those for commercial applicators, or that private applicators should be subject to a different minimum competency standard depending on whether the State issuing the certification requires them to pass a written exam. Regardless of the certification method chosen by the certifying authority, FIFRA requires that EPA establish standards for certification that require persons to be determined competent to use and handle RUPs. 7 U.S.C. 136i(a)(1). Under the existing and revised rules, EPA establishes minimum federal standards for certification to use RUPs. States have and will continue to be able to develop and maintain their own certification programs as long as their programs meet or exceed EPA's requirements. EPA also disagrees with contentions that there are no problems with the private applicator competency standards in the existing regulation for reasons discussed in the proposal (Ref. 17, pp. 51369–51372).

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

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

requirements to issues that affect their applicators.

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

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

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

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

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

EPA is not requiring that all private applicators currently certified under the existing rule complete the initial certification requirements again under today's revised rule because the burden would be significant and not outweighed by the potential benefits. There are over 480,000 persons currently certified as private applicators, and the costs associated with having each of them either attend a training course or preparing for and taking a written certification exam would dramatically increase the estimated cost of this final rule. EPA recognizes that some private applicators hold certifications obtained by attending a training program that did not require any demonstration of the ability to read or understand the pesticide labeling, and, at the certifying authority's discretion, would continue to retain their certification under a revised certification plan as long as they continued to meet the recertification requirements. However, based on the anticipated burden on private applicators and certifying authorities, EPA is not requiring that all currently-certified applicators go through the initial certification process again as a condition of approval of a certifying authority's revised certification plan.

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

EPA expects that the initial demonstration of competency for

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

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

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

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

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

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

B. Strengthen Private Applicator Competency Gauge

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

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

3. Comments and Responses

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

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

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

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

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

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

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

Several commenters suggested that training programs that would result in private applicator certification should be at least a full day and a half in length, include hands-on instruction, and offer the opportunity for participants to ask questions. A commenter noted that one certifying authority's pre-certification training program for private applicator is one and a half days. Another certifying authority noted that its current pre-certification training is approximately 11 hours, which is the time necessary to teach the material needed to pass the private applicator certification exam. The commenter noted that covering label comprehension, pesticide safety and PPE, equipment calibration and recordkeeping takes about seven hours, and the other four to five hours are spent on practical exercises, practice testing, quizzes, and interactive tools designed to enhance learning. The commenter highlighted that the expanded content of private applicator competency standards would require lengthening the training course to cover the additional topics.

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

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

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

EPA acknowledges that allowing people to certify as private applicators by attending a training session does not establish an objective certification standard, unlike a requirement to pass a written exam. EPA also acknowledges that FIFRA prohibits EPA from requiring candidates for private applicator certification to take any examination to establish competency. This also prohibits EPA from requiring an exam that only covers labeling comprehension. EPA recognizes that certifying authorities may choose to administer the same exam to private applicators (for certification) and to commercial applicators (as part of the qualification for certification), but they are not required to do so.

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

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

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

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

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

C. Eliminate Non-Reader Certification for Private Applicators

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

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

3. Comments and Responses

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

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

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

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

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

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

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

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

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

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

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

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

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

VI. Pollinator Issues in Private and Commercial Competency Standards

A. Existing Rule and Proposal

The existing competency standards for private applicators cover five general topics. The current general or "core" competency standards for commercial applicators cover nine topics with specific subpoints under each topic. EPA proposed to add to both private and commercial applicator competency standards a specific requirement related to protecting pollinators under the "environment" area of competency. EPA also requested comment on whether the commercial category for agricultural—animal pest control adequately covered the competencies necessary to treat bee hives.

B. Final Rule

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

C. Comments and Responses

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

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

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

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

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

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

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

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

VII. Establish Additional Categories for Commercial and Private Applicators

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

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

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

2. Final rule. The final rule establishes three additional categories for commercial and private applicators: Soil fumigation, non-soil fumigation, and aerial application. Certifying authorities may adopt any of these categories that are relevant in their jurisdiction. Under the final rule, certifying authorities may opt to combine the soil and non-soil fumigation categories into a single general fumigation category. Commercial and private applicators using the application methods covered by these categories must obtain the relevant certification. However, the final rule does not include the proposed requirement for commercial applicators to hold a concurrent certification in a related pest control category in order to obtain certification in a soil fumigation, non-soil fumigation, or aerial application category. Rather, the final rule permits certifying authorities to certify persons as commercial applicators in a soil fumigation, non-soil fumigation, or aerial application category if they pass the core exam and an exam covering the relevant application method category standards. Likewise, private applicators seeking to apply fumigants or use aerial equipment to make applications must obtain a certification in the category relevant to the application method in addition to their general private applicator certification.

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

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

3. Comments and Responses

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Response. EPA is unclear on the commenter's recommendation. If an applicator currently holds a soil fumigation certification, EPA does not anticipate that the applicator would need to complete the initial certification for soil fumigation under the revised certification plan. Rather, assuming the certifying authority allows applicators to retain existing certifications when the revised certification plan is implemented, the applicator could retain his or her valid soil fumigation certification and comply with the recertification requirements the certifying authority adopts for soil fumigation. However, if the applicator is only certified in agricultural plant pest control and performing soil fumigation under this certification, EPA would not consider the applicator's existing certification sufficient to consider the applicator certified in soil fumigation under the revised certification plan. The exam for initial certification would cover the competency standards specific to soil fumigation. Because soil fumigation presents different, and in most cases, greater potential for RUP exposure than other application methods if not performed properly, the final rule requires certification in the specific category to help ensure applicator competency. Upon implementation of a revised certification plan by the certifying authority, this applicator would need to obtain certification in a category covering the soil fumigation competency standards in order to continue performing soil fumigation.

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

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

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

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

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

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

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

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

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

recommended that EPA establish method-specific competencies.

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

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

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

EPA disagrees with the commenters' request to improve label language in lieu of establishing specific soil and non-soil certification categories. Fumigant applications require specialized skills and present unique risks. EPA believes that establishing categories for certification of applicators performing fumigation or aerial application, and adoption of the associated competency standards, will improve the competency of applicators using these methods, and thereby reduce the likelihood of unreasonable adverse effects. Because several States have successfully implemented these categories, EPA concludes that, in States where private applicators practice these application methods, demonstration of their competency through certification in the application method-specific category is an appropriate means of preventing unreasonable adverse effects.

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

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

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

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

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

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

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

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

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

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

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

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

Response. EPA acknowledges that the intention of the statements originating from the national organization representing State pesticide regulatory agencies correspondence was to express concern for the aggressive timeline involved with the implementation of the labeling requirement for registrant-provided training. EPA also acknowledges the correspondence from the national pesticide safety trainers' organization expressed their concern with the requirement for the training that was required to be provided by pesticide registrants.

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

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

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

Response. The fumigation categories are divided into soil and non-soil on the basis of the site of application. Regarding the concern the commenter has for the proposed requirement for separate categories, EPA was convinced by States' comments and has determined that certifying authorities may establish a single certification category for the fumigants, which encompasses the competency standards for both fumigation types. EPA does not at this time anticipate subdividing categories of use by application equipment type. EPA does not see any inconsistency between the final rule and FIFRA (7 U.S.C. 136(ee)).

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

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

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

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

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

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

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

Comment. Four States, one private individual, and two industry organizations with applicators that use RUPs in specialized applications supported the addition of a "limited use" category for commercial applicators, in order to reduce burden on applicators, educators, and certifying authorities while assuring competency. Commenters noted that certifying authorities have difficulty developing valid exams and finding appropriate training for these users. Commenters also stated that, in those States, applicators must pass exams and take training not relevant to their niche applications or the State must develop and maintain an exam and training program covering very limited, detailed content that is often applicable to very few people in the State. Most of the commenters supported the three proposed alternatives to address the category requirements, with one commenter supporting the option for certifying authorities to develop additional approaches. Four certifying authorities opposed the concept of a federal "limited use" category, stating that adopting a "limited use" category would increase burden, particularly on enforcement staff, who have to verify the alternative credentials.

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

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

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

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

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

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

A. Existing Rule and Proposal

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

EPA proposed to establish a single predator control category, with two subcategories—one specific to sodium fluoroacetate and one specific to sodium cyanide. EPA proposed the predator control category to codify the competency standards established by each product's labeling. EPA proposed to require that to use sodium fluoroacetate or sodium cyanide, an applicator would require certification in the specific category relevant to the product used.

B. Final Rule

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

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

C. Comments and Responses

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

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

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

Response. EPA agrees that these products can pose unreasonable adverse effects on human health or the environment if not used by competent applicators carefully following the labeling use directions and precautions. Currently, most of the regulatory requirements applicable to these products come from two administrative orders published in the 1975 and 1984. Codifying more of the content of those orders into this rule will provide greater transparency and provide certifying authorities and applicators improved access to information they need to ensure the products are applied by competent applicators.

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

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

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

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

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

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

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

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

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

IX. Security and Effectiveness of Exam and Training Administration

A. Overview and General Comments

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

2. Comments and Responses

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

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

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

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

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

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

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

B. Closed-Book Examinations

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

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

3. Comments and Responses

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

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

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

A number of commenters challenged EPA's assertion that open-book examinations allow a lower standard for the process of determining and assuring competency. One commenter stated that the goal of the examination should be to test understanding of concepts and application of content, rather than memorization, which can be accomplished through closed-book examinations. One commenter stated that there is no proof closed-book examinations would result in more competent applicators than open-book examinations. Some commenters argued that examinations should reflect circumstances under which a person will actually operate, and that open-book examinations train applicators how to look up and use material that will be available. One commenter asserted a belief that it is inconsistent to consider the ability to look up information on labeling to be a required competency, yet the ability to look up information in a key reference material to imply a lack of competency. One commenter noted that rather than gauging the test taker's competency, closed-book examinations would discriminate against those who simply are not good test takers. Another commenter argued that applicators would cram for closed-book examinations, and that cramming does not lead to retention. Another commenter favoring open-book examinations cited a study that found no real differences in retention a week after administering either an open or closed-book examination (Ref. 41). One university extension program stated the belief that open-book examinations allow them to test applicators' knowledge more thoroughly, in particular for category examinations which the commenter believes test more complex material than core examinations. The commenter argued that an applicator should know core material well enough to answer examination questions without needing to refer to the core manual.

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

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

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

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

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

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

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

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

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

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

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

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

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

C. Proctor Requirements

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

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

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

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

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

3. Comments and Responses

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

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

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

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

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

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

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

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

D. Verification of Identity

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

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

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

3. Comments and Responses

Comments. Many commenters agreed with EPA's proposal to require positive verification of an individual's identity with a government-issued photo-identification at the time of examination. Some commenters agreed with EPA's proposal to require verification of an individual's identity at the time of examination, provided certifying authorities are given the flexibility to determine what is considered acceptable documentation. Of those States requesting that EPA include some measure of flexibility in the requirement for identification, a few cited the need to be able to accommodate religious or other groups that do not allow the use of government-issued photo identification. One commenter suggested that EPA revise the term "government-issued" to "photographic" or "verifiable" as a way of offering States and applicators more options. One commenter suggested that some citizens might not have a government-issued ID. As an alternative, the commenter suggested EPA could require States to have a procedure as part of their certification plans to accommodate candidates and applicators lacking a government-issued photo identification, but not specify in the federal rule what it is. Another commenter proposed that EPA clearly specify that positive identification for purposes of registration for training and testing, and granting of certifications may include any document or combination of documents that satisfy proper completion of the U.S. Citizenship and Immigration Services (USCIS) employment eligibility verification documentation, or the USCIS Form I–9.

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

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

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

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

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

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

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

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

EPA is retaining the requirement that private applicators present proof of identity to the certifying authority at the time of training programs for initial certification. This requirement would help to ensure that the person who takes the examination is the same person who receives the certification, and meets the minimum age and ensures the identity of the person receiving the certification. As with examinations, EPA is allowing certifying authorities the flexibility to determine what documentation is acceptable.

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

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

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

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

E. Online Training and Certification Standards

1. Comments and Responses

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

One commenter asked how online recertification courses will be impacted by the requirement to verify the identity of certified applicators attending recertification training sessions. One certifying authority argued that online tests cannot meet the standards specified in § 171.103(a)(2) and that standards to that level are not called for in the case of private applicators. In particular, the commenter was opposed to requiring States who choose to test private applicators to only offer proctored examinations. The commenter stated the belief that if the requirement goes through as proposed, States will have to consider alternatives including a training-only option for certification and not require an examination at all. Another commenter expressed concern that requiring applicator candidates to present photo identification at the time of examination or training might preclude the use of online programs. The commenter contended that online training and certification is a valuable tool for pesticide education programs for applicators; it allows applicators to receive quality training without incurring the economic costs of traveling to a physical site, including time away from their business and expenses such as meals, transportation, and hotel accommodations. Another commenter suggested that an affidavit signed by the candidate certifying their participation could be used in place of presenting identification for online training to verify the identity of the candidate.

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

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

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

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

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

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

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

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

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

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

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

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

2. Final rule. The final rule includes four options for noncertified applicators to become qualified to use RUPs under the supervision of a certified applicator. Two of the options are the training options from the proposed rule, with edits to the training content listed in 40 CFR 171.201(d) to parallel the final handler training requirements under the WPS. For the training options, the final rule requires that noncertified applicators receive training covering the content outlined in the rule or satisfy the training requirements for handlers under the WPS. Either method of qualification must be completed within the 12 months preceding the use of an RUP under the direct supervision of a certified applicator and must be completed annually. A third option is that the noncertified applicator has met the qualification requirements established by a certifying authority that meet or exceed the annual training specified in this rule. The final option is that the noncertified applicator is currently a certified applicator but is not certified to perform the type of application being conducted, such as if a commercial applicator certified in ornamental and turf is a noncertified applicator working under the supervision of a certified applicator for a rights-of-way application, or is only certified in another jurisdiction. The final regulatory text for this requirement is located at 40 CFR 171.201(c) and (d).

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

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

3. Comments and Responses

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

Some commenters suggested other approaches. One pesticide applicator,

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

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

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

Many certifying authorities and a State farm bureau asserted that EPA is establishing an unwarranted, de facto certification program, and a new certification classification. They argued that noncertified applicators might as well become certified applicators if they have to take an exam and/or training. One certifying authority suggested EPA add an enforceable alternative to the proposed alternatives, allow on-site (or "line-of-sight", "within-sight") supervision, which would resolve any certifying authority's need for a "non-reader" provision while sparing inexperienced persons from a scripted training program for which they have no context. One certifying authority suggested that from its point of view, EPA's proposal ignored the certifying authority's long established multi-layer and varied classification system of applicators (*i.e.*, apprentices, technicians, journeymen) and would impose requirements on persons who may only occasionally handle pesticides.

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

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

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

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

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

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

In response to the request by commenters to be able to maintain existing programs, EPA specifically added a provision to the noncertified applicator qualification requirements to accommodate other approaches and will consider approval of such programs in lieu of the federal requirement during the certification plan approval process. EPA acknowledges that an option to qualify as a noncertified applicator by passing the commercial core exam, along with an appropriate method to ensure requalification, would meet or exceed the standards for noncertified applicator qualification in the final rule. However, in response to comments regarding certifying authorities' need to maintain flexibility to choose which non-training qualifications for noncertified applicator are appropriate in their jurisdiction (subject to approval by EPA under the certification plan), in the final rule EPA is not requiring certifying authorities to accept passing the commercial core exam as sufficient qualification to use RUPs under the supervision of a certified applicator; EPA leaves the decision of whether or not to allow this and other methods of qualification to the discretion of each certifying authority.

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

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

If training is used to qualify noncertified applicators, subsequent supervising certified applicators do not have to provide noncertified applicators under their direct supervision training provided they can verify the existence of and have access to documentation establishing that the noncertified applicator has completed training within the previous 12 months. Noncertified applicators who work in more than one jurisdiction must comply with the requirements of each certifying authority as specified in its EPA-approved certification plan. EPA has clarified the final rule to state that medical doctors and veterinarians, who are exempt from the standards for certification of commercial applicators under both the existing and final rules, are also exempted from the requirements for direct supervision of noncertified applicators by certified applicators.

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

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

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

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

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

Comments on Burden. Certifying authorities expressed concern that a training requirement for RUP noncertified applicators places a burden on pesticide safety education programs, certifying authorities, and exam centers that are already strained, and that EPA simply should require all applicators using RUPs to be certified. One certifying authority requested that EPA not require an exam option because applicator candidates in their jurisdiction already face a two-month wait to take an exam. One certifying authority noted that if supervisory requirements were adequate, there would be no need for a training program. Another certifying authority asserted that instead of creating more work for States, trainers, certified applicators, and noncertified applicators by establishing a training program, EPA should simply require all applicators using RUPs to be certified.

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

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

B. Establish Qualifications for Training Providers

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

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

2. Final rule. The final rule adopts the proposed requirement with minor edits. Under the final rule, the person conducting noncertified applicator training as specified in 171.201(d) must be a certified applicator, a trainer of certified applicators or handlers designated by the certifying authority, or a person who has completed a WPS train-the-trainer course for training handlers. The final regulatory text for this requirement is located at 40 CFR 171.201(d)(2).

3. Comments and Responses

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

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

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

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

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

C. Establish Qualifications for Certified Applicators Supervising Noncertified Applicators

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

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

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

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

- Be at least 18 years old.
- Have received the required training within the last 12 months.
- Have been instructed in the safe operation of equipment before use and within the previous 12 months.
- Have a copy of the full labeling in possession during use of the product.
- Have any label-required PPE (clean and in proper operating condition) and use it correctly for its intended purpose.

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

- Prepare and maintain noncertified RUP applicator training records for two years from the date of meeting training requirements.
- Before each application made under the certified applicator's supervision, provide the noncertified applicator with use-specific instructions from the labeling, conditions of the application and how to use the application equipment.
- Ensure before each day of use that equipment is inspected and if worn or damaged, it is repaired or replaced.
- Ensure a method is available for immediate communication with the noncertified applicator.

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

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

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

2. Final rule. The final rule retains the proposed requirements with several changes. First, the final rule establishes a minimum age of 18 for noncertified applicators working under the direct supervision of certified applicators and adds an exception to the minimum age of 18 for noncertified applicators working under the direct supervision of private applicators when certain conditions are met. See Unit XIII. Second, rather than requiring the supervising certified applicator to provide a copy of each applicable product labeling to the noncertified applicator as proposed, the final rule requires the supervising applicator to ensure that at all times during a supervised RUP use the noncertified applicator has access to relevant labeling. Third, the final rule clarifies that the use-specific instructions must be provided in a manner that the noncertified applicator can understand. Fourth, the requirement for use-specific instructions does not include instructions on how to use the application equipment nor does the certified applicator have to inspect the equipment before each use. Instead, the certified applicator must ensure the noncertified applicator has been instructed within the last 12 months in the safe operation of any equipment before mixing, loading, transferring or applying pesticides, and that before each day of use equipment is in proper operating condition as intended by the manufacturer and can be used without causing harm to the noncertified applicator, other persons, or the environment. Lastly, the final rule reorganizes the responsibilities of the certified applicator into three main sections: Qualifications of the supervising certified applicator, qualifications of the noncertified applicator and requirements the supervising certified applicator must ensure are met before a noncertified applicator uses an RUP under his or her supervision. The supervising certified applicator is responsible for ensuring compliance with all of these requirements.

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

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

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

- Be at least 18 years of age, except that a noncertified applicator must be at least 16 years of age if certain conditions are met. See Unit XIII. for the conditions of the exception.
- Meets at least one qualification for noncertified applicators outlined under the rule.
- Has been instructed within the last 12 months on the safe operation of any equipment used for mixing, loading, transferring, or applying pesticides.

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

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

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

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

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

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

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

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

3. Comments and Responses

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

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

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

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

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

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

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

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

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

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

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

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

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

Comments on Providing a Copy of the Labeling. One certifying authority mentioned that the difficulty of obtaining the most current labeling from retail or wholesale suppliers could be a compliance problem. Several certifying authorities questioned the need to provide the labeling if the supervising certified applicator is required to review the use-specific information from the labeling in person with the noncertified applicator. Several grower associations argued that even if the noncertified applicator was given a copy of the labeling, the certified applicator may not be present to verify that they have the labeling with them at all times. Two grower organizations asserted that providing the noncertified applicator with a copy of the labeling is redundant because it is already on the container of the product they are about to use, and the WPS requires that agricultural handlers have access to labeling. One certifying authority remarked that a labeling would not be useful to a Spanish-speaking noncertified applicator.

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

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

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

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

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

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

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

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

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

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

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

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

Comments on Inspecting Equipment Each Day before Use. One certifying authority, an applicator organization and a university extension program opposed a federal requirement that the certified applicator supervisor inspect equipment each day before use. Commenters asserted their experience that most applicators and their supervisors make a daily visual inspection of application equipment. They were concerned that as written, the proposed requirement would be difficult to comply with because many parts of the equipment are not easy to access (*e.g.*, the proposal would require supervisors to disconnect and take apart hoses to see if there was a clog). Instead, one commenter suggested that EPA amend the proposal to require that the equipment be "visually inspected for leaks or damaged parts." On the other hand, several commenters asserted that it would be difficult to enforce a requirement to visually inspect equipment.

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

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

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

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

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

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

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

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

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

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

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

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

XI. Expand Commercial Applicator Recordkeeping To Include Noncertified Applicator Training

A. Existing Rule and Proposal

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

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

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

B. Final Rule

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

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

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

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

C. Comments and Responses

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

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

The WPS requires agricultural and commercial handler employers to maintain records of handlers' completion of the training requirements. An agricultural or commercial handler employer could rely on the training record required by the WPS to satisfy the recordkeeping requirements under this final rule and those under the WPS.

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

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

XII. Establish Minimum Age for Certified Applicators

A. Existing Rule and Proposal

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

B. Final Rule

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

C. Comments and Responses

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

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

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

benefits related to establishing a minimum age.

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

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

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

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

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

Comments were generally less supportive of a minimum age of 18 for private applicators than for commercial applicators. Comments opposing the proposed minimum age of 18 for private applicators emphasized concerns for impacts to family farms. Many commenters representing certifying authorities, pesticide applicator associations, small business advocates and applicators recommended that EPA consider the impacts of a minimum age to family farms. A few commenters expressed general support for a minimum age of 16 for private applicators. Other commenters who supported establishing a minimum age of 16 noted that this requirement would align with DOL's restriction on handling pesticides in toxicity categories I and II in agriculture. A few commenters suggested establishing a minimum age of 16 or including an exemption from the minimum age for private applicators that certify through training courses provided by technical or vocational schools.

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

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

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

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

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

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

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

EPA also disagrees with commenters' assertions that EPA should defer to certifying authorities or the FLSA and not establish any age-related restrictions related to use of RUPs. EPA has the responsibility under FIFRA to regulate the use of pesticides to avoid unreasonable adverse effects, apart from any requirements established by other federal or state laws. The DOL's actions under the FLSA limiting the use of certain pesticides to persons at least 16 years old do not preclude EPA from taking actions to ensure that human health and the environment are protected from unreasonable adverse effects of pesticides. While DOL's hazardous occupations order prohibiting those under 16 years old from handling certain pesticides satisfies the purposes of the FLSA, those purposes are distinct from those of FIFRA. EPA has concluded that because, as discussed previously, adolescents' bodies, maturity, and judgment are still developing, the application of RUPs by persons under 18 years old presents an unreasonable likelihood of adverse effects. Therefore, the final rule generally limits the application of RUPs to persons who are at least 18 years old.

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

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

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

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

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

XIII. Establish Minimum Age for Noncertified Applicators

A. Existing Rule and Proposal

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

B. Final Rule

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

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

C. Comments and Responses

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

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

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

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

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

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

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

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

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

EPA recognizes that DOL prohibits persons under 18 years old from engaging in hazardous tasks in other industries, and that some certifying authorities have taken action to prohibit certain adolescents from applying RUPs. See Unit XII. for a discussion of EPA's consideration of existing rules related to the minimum age requirement.

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

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

EPA agrees that adolescents' developmental status does not differ if they are employees on a farm owned by an immediate family or by someone unrelated to them, as also discussed in Unit XII. However, EPA recognizes that imposing a minimum age for noncertified applicators applying under the direct supervision of a certified applicator could significantly disrupt some family-owned farms. Given the high social cost of imposing a minimum age of 18 years old on noncertified applicators on family farms, EPA has included in the final rule an exception to this requirement. The exception allows noncertified applicators who are at least 16 years old to use RUPs under the direct supervision of a private applicator who is also an immediate family member. The final rule adds a definition of immediate family that matches the definition included in the revised WPS. However, the exception in this rule is different from the complete exemption from the minimum age requirement in the WPS for handlers and early-entry workers who are for members of the owner's immediate family, because even in the context of the family-owned farm, the heightened risks of RUPs warrant both training and a minimum age of 16. Although under the WPS, owners and their immediate family members are also exempted from certain provisions of the WPS (*e.g.*, providing pesticide safety training for immediate family members), this certification rule does not include any exemption from or exception to the training requirement for noncertified applicators. In addition, the exception does not apply to certain types of RUP applications that present greater potential for adverse effects: The exception does not apply soil and non-soil fumigations, aerial applications, and use of predator control products (sodium cyanide and sodium fluoroacetate). Noncertified applicators who use RUPs in these application categories must be at least 18 years old.

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

XIV. Recertification

A. Existing Rule and Proposal

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

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

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

B. Final Rule

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

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

C. Comments and Responses

Comments—Support Overall Approach or a More Stringent Approach. Several individual commenters generally supported the proposed requirements to increase the amount of training required. One individual supported standardizing the amount of training and another urged EPA to require training annually instead of every three years. Several worker/handler advocacy organizations urged EPA to make the recertification requirements more stringent by requiring certified applicators to recertify every year and take more training than was proposed. They also suggested that EPA require all pesticide applicators to take a written exam after every recertification training to demonstrate their competency and verify their attendance.

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

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

Many commenters argued that States have invested resources in determining appropriate continuing education programs and the commenters largely believe that existing recertification programs are effective. State pesticide regulatory agencies or university extension programs in a few States cited relatively low violation rates to justify the effectiveness of their certification and recertification programs. For example, there were 4,600 pesticide use inspections conducted in Florida from 2010 to 2015. Of these, 2,701 involved a licensed applicator but only 132 of the inspections identified RUP violations. Of the 132 inspections with RUP violations, there were 290 individual RUP violations listed and 260 of these were "failure to maintain applicator RUP records," so only about 30 of the RUP violations that were identified were something other than recordkeeping deficiencies.

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

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

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

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

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

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

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

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

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

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

EPA also acknowledges that the Economic Analysis of the proposed rule did not account for the costs of all of the changes certifying authorities and pesticide safety educators would have had to make to comply with the proposed approach. For example, changing from workshop-based continuing education to CEU-based programs would have required about 15 certifying authorities to completely redesign their recertification programs. Also, all certifying authorities would have had to develop or revise systems to track core versus category CEUs and the distribution of CEUs over the first and last 18 months of the certification period. Additionally, certifying authorities with longer certification periods would have had to provide more continuing education opportunities to accommodate more applicators needing training each year, so more pesticide safety educators would have been needed in States where training is done solely by the university extension program. Finally, the Economic Analysis did not fully account for applicators who are certified in multiple categories, especially in states that have 20 or more categories. The proposed requirement for six CEUs per category would have required more training than EPA's estimate, which assumed that each commercial applicator was certified in two categories. However, EPA does not have to include the costs described in this paragraph associated with the proposed rule in the revised Economic Analysis because the final rule adopts a more flexible, performance standard approach instead of the prescriptive requirements and quantitative standards of the proposed rule.

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

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

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

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

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

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

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

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

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

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

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

Many commenters also addressed the burden this proposed requirement would put on certifying authorities, university extension programs and applicators. First, certifying authorities do not have systems in place to track CEUs on 18-month intervals and would need to update their tracking systems to do this. The Michigan Department of Agriculture and Rural Development estimated it would cost at least $100,000 to update their tracking system, which cost $250,000 in 2006. Second, applicators would also have to track their progress over time, which would make the process more difficult and would create an incentive for them to take exams instead of the continuing education. Third, this would create more of a burden for university extension programs and applicators to have the needed training courses available at the required times. Since most training happens in the winter and early spring, there could be limited opportunities for applicators to obtain the necessary training in the last 18 months of their certification period in general and especially if sessions are cancelled due to weather or other conditions. Obtaining the required amount of training in the last half of the certification period could be even more difficult for applicators who have a second job and for those in the military because their availability may be even more limited.

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

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

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

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

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

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

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

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

XV. General Certification Plan Requirements

A. Overview

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

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

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

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

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

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

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

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

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

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

3. Comments and Responses

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

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

C. Program Reporting

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

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

- The numbers of new, recertified, and total applicators holding a valid general private certification at the end of the last 12-month reporting period.
- For each application method-specific category specified in 40 CFR 171.105(c), the numbers of new, recertified, and total private applicators holding valid certifications at the end of the last 12-month reporting period.
- The numbers of new, recertified, and total commercial applicators holding a valid core and at least one category certification at the end of the last 12-month reporting period.
- For each commercial applicator certification category specified in 40 CFR 171.101(a), the numbers of new, recertified, and total commercial applicators holding a valid certification in each of those categories at the end of the last 12-month reporting period.
- For each application method-specific category specified in 40 CFR 171.101(b), the numbers of new, recertified, and total valid certifications for the last 12 month reporting period.
- If a State had established subcategories within any of the commercial categories, the report would have to include the numbers of new, recertified, and total commercial applicators holding valid certifications in each of the subcategories.
- A description of any modifications made to the approved certification plan during the last 12-month reporting period that have not been previously evaluated by EPA.
- A description of any proposed changes to the certification plan that the State anticipates making during the next reporting period that may affect the certification plan.
- The number and description of enforcement actions taken for any violations of Federal or state laws and regulations involving use of RUPs during the last 12-month reporting period.
- A narrative summary describing the misuse incidents or enforcement activities related to use of RUPs during the last 12-month reporting period, including specific information on the pesticide(s) used, circumstances of the incident, nature of the violation, and information on the applicator's certification. This section should include a discussion of potential changes in policy or procedure to prevent future incidents or violations.

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

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

3. Comments and Responses

Comments. Many commenters, including certifying authorities,

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

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

D. Civil and Criminal Penalty Authority

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

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

3. Comments and Responses

Comments. EPA received comments on this provision from certifying authorities and from certifying authority and pesticide safety educator associations. Almost all commenters suggested that EPA eliminate the proposed requirement for States to have both civil and criminal penalty authority. Commenters generally requested that EPA retain the existing language ". . . for assessing criminal and/or civil penalties," rather than the proposed language ". . . for assessing criminal and civil penalties." Commenters recognized that FIFRA has a requirement for States to have both criminal and civil penalty authority, but requested that EPA retain more lenient language.

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

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

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

E. Commercial Applicator Recordkeeping

1. Existing rule and proposal. The existing rule mandates that State plans include requirements for certified commercial applicators to maintain for a least two years routine operational records containing information on kinds, amounts, uses, dates and places of applications of RUPs.

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

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

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

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

3. Comments and Responses

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

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

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

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

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

F. RUP Dealer Recordkeeping

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

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

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

3. Comments and Responses

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

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

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

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

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

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

G. Certified Applicator Credentials

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

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

- The full name of the certified applicator.
- The certification, license, or credential number of the certified applicator.
- The type of certification (private or commercial).
- The category(ies), including any application method-specific category(ies) and subcategories of certification, in which the applicator is certified, as applicable.
- The expiration date of the certification.
- A statement that the certification is based on a certification issued by another State, Tribe, or Federal agency, if applicable, and the identity of that State, Tribe or Federal agency.

2. Final rule. The final rule includes a requirement for States to "describe the credentials or documents the State certifying authority will issue to each certified applicator verifying certification." The final rule does not include the proposed general requirement for applicator credentials to

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

3. Comments and Responses

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

A few commenters expressed specific opposition to the proposal to add to the credential, if applicable, a statement specifying whether the certification was issued in reliance upon another jurisdiction's certification. Applicators may be certified in several categories, and some but not others may be based on certifications received from other jurisdictions. Commenters said that distinguishing between the categories of certification issued by the certifying authority and those based on certifications earned in another jurisdiction would impose significant burden on the certifying authority and be difficult to accomplish.

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

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

H. Reliance on Certification by Other Certifying Authorities

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

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

- A certifying authority could only rely on current, valid certifications issued under another certifying authority's approved certification plan, and could only rely on a certification issued by a certifying authority that issued its certification based on an independent determination of competency without reliance on any other existing certification or authority. For each category of certification that would be accepted, the certifying authority must determine that the standards of competency in the other jurisdiction are comparable to the standards of the accepting certifying authority.
- Any certifying authority which chooses to certify applicators based, in whole or in part, on the applicator having been certified by another certifying authority, must implement a mechanism to ensure the certifying authority would immediately terminate an applicator's certification if the applicator's original certification terminates for any reason.
- The certifying authority issuing a certification based, in whole or in part, on the applicator having been certified by another certifying authority would have to issue an appropriate credential or document in accordance with the requirements of this section.

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

- A certifying authority may only rely on current, valid certifications issued under an approved certification plan.
- The certifying authority has examined the standards of competency in the jurisdiction that originally certified the applicator and has determined that, for each category of certification that will be accepted, they are comparable to its own standards.
- Any certifying authority that chooses to certify applicators based, in whole or in part, on the applicator having been certified by another State, Tribe, or Federal agency, must implement a mechanism that allows the certifying authority to terminate an applicator's certification upon notification that the applicator's original certification terminates because the certificate holder has been convicted under section 14(b) of FIFRA (7 U.S.C. 136l(b) or has been subject to a final order imposing a civil penalty under section 14(a) of FIFRA (7 U.S.C. 136l(a).
- The certifying authority issuing a certification based, in whole or in part, on the applicator having been certified by another State, Tribe or Federal agency must issue an appropriate credential or document in accordance with the requirements of § 171.303(a)(8).

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

3. Comments and Responses

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

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

Many commenters specifically opposed the proposed provisions requiring that the certifications issued in reliance on another jurisdictions' certification "must terminate immediately if the applicator's original certification terminates for any reason" and requiring that certifying authorities "must implement a mechanism to ensure the State will immediately terminate an applicator's certification if the applicator's original certification terminates for any reason." They noted that implementation of such a provision would be extremely difficult or impossible. Once a certification has been issued, a certifying authority does not generally track whether it was based on a certification issued in another jurisdiction. Further, the jurisdiction in which the applicator earned the original certification is unlikely to track which other jurisdictions used its certification as the basis for certification or notify the other jurisdictions when action is taken against the applicator that could result in termination of the certification. Commenters noted that absent a national certification database that would provide notifications when an applicator's certification status changed, certifying authorities would not be able to track the status of each's applicator original certification. Commenters also pointed out that what caused termination of a certification in one jurisdiction may have no impact on another jurisdiction's certification. One jurisdiction noted that it will award an initial certification based on certification granted by another certifying authority, but the applicator must satisfy all of the second certifying authority's recertification requirements. This commenter noted that many applicators who receive their initial credential based on certification awarded by another jurisdiction will let the original certification lapse and continue to meet the necessary recertification requirements in the reciprocal State to maintain their certification. Under the proposal, this would require the certifying authority that relied on another jurisdiction's certification to terminate its certification despite the applicator satisfying all necessary recertification requirements within that jurisdiction.

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

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

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

Reponses. EPA agrees that each certifying authority should have discretion to rely or not rely on other jurisdictions' certification programs and notes that EPA is not mandating such reliance in any form. However, EPA notes that the existing rule contains provisions similar to some of the elements EPA proposed; requiring that a certification plan must describe any reliance on other jurisdictions' certifications is not new.

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

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

I. Certification Plan Maintenance, Modification, and Withdrawal

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

require additional review and approval by EPA.

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

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

3. Comments and Responses

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

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

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

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

J. Certified Applicator Lists Available to the Public

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

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

3. Comments and Responses

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

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

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

A. Existing Rule and Proposal

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

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

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

B. Final Rule

The final rule includes the proposed requirements for Federal agency

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

C. Comments and Responses

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

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

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

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

XVII. Certification Programs in Indian Country

A. Clarifying Options for Certification Programs in Indian Country

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

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

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

- Revise the current option for Tribes relying on State certification by providing for Tribes to utilize State, Tribal, or Federal agency certification; and replacing the provision regarding Tribes entering into cooperative agreements with States, with a requirement for Tribes to enter into agreements with EPA Regional offices. The proposal also eliminated current requirements for States to include in their State certification plans references to any cooperative agreements with Tribes for recognizing the States' certificates.
- Clarify that EPA can, in consultation with the affected Tribe(s), implement a Federal certification plan in any area of Indian country not covered by an approved certification plan.
- Update the requirements for Tribal plans by providing for submission of Tribal plans directly to the EPA; and requiring those Tribes that choose to manage their own certification plan to conform to the new standards being proposed for State and Federal agency certification plans for initial certification and recertification of private and commercial applicators and the training and supervision of noncertified applicators who apply RUPs under the direct supervision of a certified applicator. However, Tribes would not be required to meet criminal enforcement requirements that would apply to State plans.

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

3. Comments and Responses

Comments—General

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

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

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

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

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

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

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

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

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

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

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

This definition is consistent with the definition of Indian country at 18 U.S.C. 1151. Under EPA's longstanding approach, EPA treats as reservations, and thus as Indian country, lands held by the United States in trust for an Indian Tribe even if the Tribal trust land is located outside the boundaries of a formal Indian reservation. (See, *e.g.*, 56 FR 64876, 64881 (December 12, 1991); 63 FR 7254, 7258 (February 12, 1998)).Under relevant principles of federal Indian law, jurisdiction in Indian country generally lies with the federal government and the relevant Tribe, and not with the States. *Alaska* v. *Native Vill. of Venetie Tribal Gov't*, 522 U.S. 520, 527 n.1 (1998). State certification plans are, therefore, generally not approved by EPA to operate in Indian country absent an express demonstration of authority by a State—*e.g.*, under a separate federal statute granting the State such authority—and an express approval by EPA of the State plan for such area. Currently, most of Indian country is covered by EPA's existing Federal certification plan for Indian country, and will continue to be covered by that plan unless and until replaced by an EPA-approved plan.

For purposes of implementing the certification plan under FIFRA and EPA's regulations, only products classified as RUPs by EPA trigger certification requirements; non-RUPs can be used by any person and do not require the user to be certified. States must use EPA's list of RUPs, but may classify additional non-RUPs as restricted at the State level. This additional State product restriction would trigger the certification requirements at the State level, but would not necessarily trigger certification requirements in Indian country. Because Indian country includes all lands within the exterior boundaries of an Indian reservation irrespective of who owns the land, an applicable certification plan administered pursuant to a Tribal-EPA agreement (*i.e.*, pursuant to section 171.307(a) of the proposed rule), would generally apply on all land that is located within the exterior boundaries of an Indian reservation. Although proposed section 171.307(a) (like section 171.10(a) of the existing rule) permits Indian Tribes to allow RUP use by applicators holding valid State certifications, the rule would not authorize or approve any State plan or exercise of State jurisdiction in Indian country under FIFRA, whether on fee-owned land or otherwise. For purposes of the certification plan, jurisdiction under this scenario would be exercised by the relevant Tribe and EPA in accordance with the Tribal-EPA agreement. To the extent the Tribal fee land described in the Tribal organization's comment is within the exterior boundaries of an Indian reservation, it would be reservation land and, thus, Indian country, regardless of the fact that a Tribe or other entity holds a deed of ownership to the land. EPA notes that there may be circumstances where non-reservation lands are entirely surrounded by reservation lands. This may occur, for instance, where an Indian reservation is formed around an area that is never made part of the reservation, where land located within the original exterior boundaries of an Indian reservation loses its reservation status by virtue of an act of Congress, or in other unusual circumstances. To the extent the Tribal fee land described in the comment is non-reservation (and non-Indian country) land, then the State's RUP list would apply as it would in any other non-Indian country area.

Comments—EPA-administered certification plan in Indian country. One Tribal organization stated that they did not support a Federal certification plan that would cover applicators using RUPs in different, non-contiguous parts of Indian country. Instead, the commenter expressed support for the existing EPA plan for the certification of applicators of RUPs within Indian country which provides that "[t]he certification on which the Federal certificate will be based must be from a State or Tribe with a contiguous boundary to the relevant areas of Indian country (Ref. 3)." Additionally, the commenter stated that the existing EPA plan for certification in Indian country indicated that EPA Regional offices have little discretion in allowing Federal certification under the final EPA plan based on valid certifications from nearby States or Tribes not directly contiguous to the Indian country area at issue.

One Federal agency stated that EPA should consider certification under the corresponding State plan to be sufficient in place of the EPA national plan. The commenter believed that this would reduce the burden for applicators, particularly for APHIS Wildlife Services commercial applicators, whose assistance has been requested by the Tribe and who are already certified in that State.

Additionally, two applicators stated that the rules and certification within Indian country should be the same as the rules and regulations governed by the State in which the Indian country exists.

Response—EPA-administered certification plan in Indian country. It is EPA's position that certification plans in Indian country should serve the needs of the relevant Tribe and Indian country community. Tribes are not required to develop their own plans. Where EPA

has not approved a certification plan for an area of Indian country, the Agency is authorized to implement an EPA-administered plan for the Federal certification of applicators of RUPs pursuant to FIFRA sections 11 and 23. 7 U.S.C. 136i, 136u. In any area of Indian country where EPA has not approved a Tribal certification plan and no other EPA-approved or administered plan applies, EPA will implement the 2013 "EPA Plan for the Federal Certification of Applicators of Restricted Use Pesticides within Indian Country" (Ref.3).

The comments regarding an EPA-administered certification plan for Indian country appear to reflect a misunderstanding of what was meant in the proposal. EPA wishes to clarify that the EPA-administered plan would cover applicators in different, non-contiguous parts of Indian country in the sense that it is intended to serve all areas of Indian country throughout the United States where no other certification mechanism exists (*i.e.*, Indian country of those Tribes that do not implement their own certification plan or base their certification on those of another certifying authority, or where no other approved plan is in place). Such a plan is already in place and the options for certification methods established in the 2013 "EPA Plan for the Federal Certification of Applicators of Restricted Use Pesticides within Indian Country" are unaffected by these rule changes (Ref. 3). EPA anticipates that in most cases it will issue certifications to individuals with documentation of certification to apply federally designated RUPs through a Federal plan or through an EPA-approved State or Tribal plan with a contiguous boundary to the relevant area of Indian country. Additionally, an EPA-issued certification will only be valid in those areas of Indian country specified by that certification and will not necessarily be applicable to different, non-contiguous areas of Indian country.

Most areas of Indian country are not covered by an EPA-approved plan, so the EPA-administered plan for the federal certification of applicators of RUPs within Indian country already applies to most of Indian country. Since private and commercial applicators certified by a State have no authority to apply RUPs in Indian country except pursuant to a Tribal plan or the Federal plan, EPA believes any provisions that facilitate these plans will be a benefit to State-certified applicators, rather than a burden. EPA does not believe that the requirements for the EPA-administered plan in the final rule will negatively impact or cause undue burden on private or commercial applicators because applicators with an approved certification from a certifying authority with a contiguous boundary to the relevant area of Indian country will likely be able to obtain certification under the EPA-administered plan. The changes in the final rule are primarily a clarification of existing requirements and policy, and not the imposition of substantial new requirements or obligations with respect to the EPA-administered plan. As such, applicators seeking certification in areas of Indian country under the EPA-administered plan are already familiar with this process.

B. EPA's Consultation Process With Tribal Governments

Comments. One Tribal organization provided comments on EPA's consultation process during the proposed rulemaking, expressing the view that the Tribal consultation regarding the proposed rule fell short for at least three reasons. First, the commenter stated that EPA failed to indicate to whom the letters of invitation for consultation were sent, such as Tribal leaders, administrators and/or environmental department directors. The commenter stated that this is important information to know in order to determine whether EPA provided Indian Tribes with proper notice about consultation regarding the proposed rule. Second, the commenter stated that EPA failed to provide proof that the Tribal representatives who participated on the Tribal consultation calls were designated by their respective Tribes to consult with EPA. Absent such a designation, the commenter suggested that these representatives were likely participating for informational purposes only. Third, the commenter indicated that the Tribal consultation took place several years ago, long before EPA knew what portions of the Certification of Pesticide Applicators rule it was considering revising, and suggested that EPA should have invited Tribes to participate in additional government-to-government consultation at a time closer to the proposal being issued. The commenter stated that EPA must engage in meaningful government-to-government consultation now to allow for each individual Tribe to consider the proposal in its own way.

Response. As stated in the proposed rule, EPA consulted with Tribal officials during the development of this action via a series of scheduled conference calls with Tribal representatives to inform them about potential regulatory changes, especially areas that could affect Tribes, and to inform EPA's development of the proposed rule. EPA also informed the commenter about the potential changes to the rule. A summary of EPA's Tribal consultation is provided in the docket for this action (Ref. 30).

During the consultation process, the Agency prepared a letter of invitation (Ref. 47) and a fact sheet (Ref. 48) on the Certification of Pesticide Applicators rule for mailing to federally-recognized Tribal leaders, environmental directors, and pesticide program directors. Approximately one thousand letters and fact sheets were mailed to Tribal leaders in early April 2010, prior to the scheduled consultation calls. An initial call was held with the commenter on April 7, 2010, to inform them of the consultation and provide an overview of the regulatory revisions. The consultation calls were held on April 27 and 29, 2010. Twenty-five Tribal representatives attended one or both calls. Among the nearly 20 different Tribes represented during the calls, EPA was able to document participation from the following Tribes:

- Sac & Fox Tribe of the Mississippi in Iowa (Meskwaki Nation)
- Salt River Pima-Maricopa Indian Community
- Yakama Nation
- Flandreau Santee Sioux Tribe
- Jicarilla Apache Nation
- Gila River Indian Community
- Southern Ute
- Confederated Salish and Kootenai Tribes
- Winnebago Tribe of Nebraska
- Oglala Sioux Tribe

EPA began the consultation process noting that the regulatory process was continuing to move forward and this was the time for Tribes to offer their comments and suggestions prior to proposal, and that there would be further opportunities to comment after the proposed rule was published. The background of the rule was presented, and discussions were held among the participants.

As indicated by the commenter and docketed material, EPA sent the Tribes the letter inviting Tribal leaders to participate in consultations on April 1, 2010, and the consultation meetings occurred April 27 and 29, 2010. EPA acknowledges that this was a short timeframe between receiving the notification and holding the consultation meeting, and that the Agency should continue to strive to improve our consultation protocols to ensure that sufficient time is available for Tribes to participate in consultations. EPA notes that this consultation occurred prior to the

Agency issuing its Tribal consultation policy in May 2011, titled "EPA Policy on Consultation and Coordination with Indian Tribes," (Ref. 49) and that the Agency's consultation procedures have continued to improve following finalization of that Policy. In conducting consultation on this regulatory revision, EPA followed the procedures that were in effect at that time. Additionally, EPA believes that the consultation efforts in 2010, which covered both the Worker Protection Standard rulemaking and Certification of Pesticide Applicators rule (Ref. 30), provided adequate materials (*e.g.*, presentation (Ref. 50), fact sheet (Ref. 48), follow-up report (Ref. 30)) for Tribal leaders and representatives to review. The information provided in those materials and the consultation meetings represented proposals that were not substantially different from what EPA eventually published in the proposed rule, which include efforts to revise the rule to streamline opportunities for Tribes to participate in the certification and training program. Given that EPA believes it provided adequate information and materials to the Tribes on the proposed changes, that the rule closely corresponds to the proposals in regard to certification in Indian country, and that EPA did not receive any comments on the proposals from individual Tribes, EPA does not believe that further consultation is needed prior to finalizing the rule.

EPA plans to provide at least two informational sessions for Tribes on the final rule to assist Tribes in understanding the changes to the rule and the resource needs for both implementation and enforcement. One of these informational sessions will be provided to the Tribal organization that provided the comment, while the other session will be an open session for all 567 federally recognized Tribes. These informational sessions will be in addition to the general outreach and implementation and compliance assistance that EPA plans to offer to all stakeholders over the next year.

XVIII. Revise Provisions for EPA-Administered Plans

A. Existing Rule and Proposal

The existing rule establishes requirements for EPA-administered certification of applicators of RUPs in States or areas of Indian country without EPA-approved certification plans in place, including specific standards for certification and recertification of pesticide applicators.

EPA proposed to revise the existing rule to incorporate the proposed changes to State certification plans related to applicator certification, recertification, and noncertified applicator qualifications, as well as reporting and maintenance requirements. EPA intended the proposed revisions to parallel the proposed revisions to requirements proposed for States, Tribes, and other Federal agencies.

B. Final Rule

EPA is finalizing the requirements for EPA-administered certification plans to parallel State certification plan requirements. The final requirements are substantially similar to the proposal, except where the proposed requirements for State certification plans have changed in the final rule, corresponding changes have been adopted in the EPA-administered plan section. The final regulatory requirements for EPA-administered plans are available at 40 CFR 171.311.

C. Comments and Responses

Comments. One commenter expressed general support for the proposed revisions to this section. Two commenters suggested that EPA-administered plans should fall within the same standards as the State within which the plan is being administered.

Response. EPA notes that by definition, an EPA-administered plan cannot fall within the same standards as the State within which the plan is being administered, because EPA only administers certifications if there is no certification plan in place for the jurisdiction. However, any EPA-administered plan will meet or exceed the standards for State plans in § 171.303 of the final rule.

XIX. Revise Definitions and Restructure 40 CFR Part 171

A. Definitions

1. Existing rule and proposal. The existing rule includes definitions for terms related to the rule, as well as terms defined in FIFRA.

EPA proposed to delete, amend, and add definitions to the rule. EPA proposed to delete terms defined in FIFRA, as well as terms not relevant to the proposed rule. EPA proposed to redefine "agricultural commodity", "certification", "compatibility", "competent", "dealership", "non-target organism", "ornamental", "practical knowledge", "principal place of business", and "toxicity." EPA proposed to replace five existing terms with new terms: Replace "accident" with "mishap," replace "calibration of equipment" with "calibration," replace "protective equipment" with "personal protective equipment," replace "uncertified persons" with "noncertified applicator," and replace "restricted use pesticide dealer" with "restricted use pesticide retail dealer." EPA proposed to add new terms and definitions: "Application," "application method," "application-method specific certification category," "applicator," "fumigant" and "fumigation," "Indian country" and "Indian Tribe," "use" and "use-specific instructions."

2. Final rule. The final rule deletes all terms as proposed, except for "Agency" (retained existing definition with minor changes). The final rule adds two terms and definitions: "Applying" and "immediate family." EPA is not finalizing two proposed terms and definitions: "Application method," and "application-method specific category." About half of the proposed definitions are being finalized as proposed while the other half have been revised, as described below. Commenters requested that EPA add the following definitions, but they are not included in the final rule: "Active training time," "drones," "immediate," and "immediately." Relevant definitions and terms are discussed below in alphabetical order.

The final regulatory text for these definitions is available at 40 CFR 171.3.

3. Active training time. i. Existing rule and proposal. "Active training time" is not defined in the current or proposed rules.

ii. Final rule. The final rule does not include a definition for "active training time."

iii. Comments and responses.

Comments. One certifying authority requested a definition for the term "active training time," noting that EPA used the term in discussions of the length of time that constitutes a CEU.

Response. The final rule does not define CEUs or the number of CEUs that an applicator must earn to maintain certification. Therefore, EPA has not included this term in the final rule.

4. Agricultural commodity. i. Existing rule and proposal. EPA proposed to modify the definition of "agricultural commodity" in the existing rule by inserting the phrase "but not limited to," as follows (emphasis added): "agricultural commodity means any plant, or part thereof, or animal, or animal product, produced by a person (including, *but not limited to,* a farmer, rancher, vineyardist, plant propagator, Christmas tree grower, aquaculturist, floriculturist, orchardists forester, or other comparable persons) primarily for sale, consumption, propagation, or other use by man or animals."

ii. Final rule. The final rule revises the proposed definition to include fungus and algae. Agricultural commodity means any plant, fungus, or algae, or part thereof, or any animal or animal product, produced by a person (including, but not limited to, farmers, ranchers, vineyardists, plant propagators, Christmas tree growers, aquaculturists, floriculturists, orchardists, foresters, or other comparable persons) primarily for sale, consumption, propagation, or use by man or animals.

iii. Comments and responses.

Comment. One commenter suggested the EPA consider expanding the definition of agricultural commodity to include fungi (*e.g.,* mushrooms) and algae.

Response. In the final rule, EPA is revising the definition of "agricultural commodity" as suggested by the commenter to ensure that mushrooms and algae are included in the scope of the definition.

5. Agency. i. Existing rule and proposal. "Agency" is defined in the existing rule to mean the United States Environmental Protection Agency unless otherwise specified. EPA unintentionally omitted this definition from the proposal.

ii. Final rule. The final rule retains "Agency" and the existing definition of Agency, with some changes to the order of the words.

6. Application and applying. i. Existing rule and proposal. "Application" is not defined in the existing rule. EPA proposed to define "application" to mean "the dispersal of a pesticide on, in, at, or around a target site."

ii. Final rule. EPA has revised the proposed definition in the final rule to replace "around" with "directed toward." EPA has also revised the term defined to include both "application" and "applying." The final definition is "Application and applying mean the dispersal of a pesticide on, in, at, or *directed toward* a target site."

iii. Comments and responses.

Comments. Commenters expressed a belief that the inclusion of the word "around" in the definition could be interpreted as allowing pesticide overspray or drift. They explained that a target site is a specific defined area where a pesticide is applied, and that using the word "around" could lead someone to think that it is acceptable if a treatment is "in the ballpark." Commenters urged EPA to eliminate the word "around" from this definition. One commenter recommended EPA replace the term "around" with "perimeter."

Response. EPA agrees with commenters that the word "around" in this context could be misconstrued as permitting off-target application. In the final rule, EPA has replaced "around" with "toward," to shift the focus to the user's intention to direct the application towards the target site. The revised definition appears sufficient for distinguishing between application and other pesticide-related activities (*e.g.,* mixing, disposal), and should not be interpreted as a statement regarding what applications are lawful. EPA notes that off-target application of an RUP is misuse and a violation of FIFRA.

7. Application method and application method-specific category. i. Existing rule and proposal. "Application method" and "application method-specific category" are not defined in the existing rule. EPA proposed to add these two terms to the rule.

ii. Final rule. EPA is not adding either of these terms to the final rule. EPA has chosen not to distinguish application method-specific categories from other use categories in the final rule, so adding these terms to the rule is not necessary.

8. Applicator and certification. i. Existing rule and proposal. "Applicator" is not defined in the existing rule. EPA proposed to define "Applicator" to mean "any individual using a restricted use pesticide. An applicator may be certified as a commercial or private applicator as defined in FIFRA or may be a noncertified applicator as defined in this part."

In the existing rule, "certification" means "the recognition by a certifying agency that a person is competent and thus authorized to use or supervise the use of restricted use pesticides. EPA proposed to define "certification" to mean "a certifying authority's issuance, pursuant to this part, of authorization to a person to use or supervise the use of restricted use pesticides."

ii. Final rule. The final rule includes "applicator" and "certification" as proposed.

iii. Comments and responses.

Comments. One commenter argued that since almost every State also defines "applicator" and "certification" to include general use pesticides, both definitions in this rule should include non-RUPs. Another commenter supported the definitions as proposed.

Response. EPA acknowledges that many certifying authorities may define "applicator" and "certification" to include non-RUPs. However, FIFRA allows EPA to establish standards for certification only for users of RUPs, not all pesticides. Therefore, EPA has decided to finalize the definitions as proposed, including only RUPs, not all pesticides.

9. Calibration. i. Existing rule and proposal. In the existing rule, EPA defines "calibration of equipment." EPA proposed minor changes to the definition, removing the phrase "of equipment" and adding the phrase "if applicable," to read: "Calibration means measurement of dispersal or output of application equipment and adjustment of such equipment to establish a specific rate of dispersal and, *if applicable,* droplet or particle size of a pesticide dispersed by the equipment."

ii. Final rule. The final rule revises the definition of calibration to mean "measurement of dispersal or output of application equipment and adjustment of such equipment to establish a specific rate of dispersal, and, if applicable, droplet or particle size of a pesticide, and/or equalized dispersal pattern."

iii. Comments and Responses

Comment. One commenter noted that the existing and proposed definitions of calibration do not contain a reference to equalized pattern or product dispersion. The commenter contended that these elements are critical to proper use.

Response. EPA agrees with the commenter and as a result has amended the definition to include "equalized dispersal pattern."

10. Certified applicator. i. Existing rule and proposal. In the existing rule, "certified applicator" means any individual who is certified to use or supervise the use of any restricted use pesticides covered by his certification. EPA proposed to remove the definition from the rule.

ii. Final rule. The final rule does not include a definition of certified applicator.

11. Certifying authority. i. Existing rule and proposal. "Certifying authority" is not defined in the existing rule. EPA proposed to define "certifying authority" as "the Agency, or a State, Tribal, or Federal agency that issues restricted use pesticide applicator certifications pursuant to a certification plan approved by the Agency under this part."

ii. Final rule. EPA is finalizing the definition as proposed.

12. Compatibility. i. Existing rule and proposal. The existing rule includes a definition of "compatibility." EPA proposed to redefine "compatibility" to mean "the extent to which a pesticide can be combined with other chemicals without causing undesirable results."

ii. Final rule. EPA is finalizing the definition as proposed.

13. Competent (competency) and practical knowledge. i. Existing rule and proposal. The existing rule defines "competent" and "practical knowledge." EPA proposed to redefine "competent" to mean "having the practical knowledge, skills, experience, and judgement necessary to perform functions associated with restricted use pesticide application without causing unreasonable adverse effects, where the nature and degree of competency required relate directly to the nature of the activity and the degree of independent responsibility", and "practical knowledge" to mean "the possession of pertinent facts and comprehension sufficient to properly perform functions associated with the application of restricted use pesticides, including properly responding to reasonable foreseeable problems and situations."

ii. Final rule. EPA is changing the term from "competent" to "competency" and finalizing the definition as proposed for the term "competent." In the final rule, EPA is revising the definition of "practical knowledge" by replacing the phrase "application of restricted use pesticides" with "use of restricted use pesticides" to clearly include all of the activities included in the definition of use. In the final rule, "practical knowledge" means "the possession of pertinent facts and comprehension sufficient to properly perform functions associated with the use of restricted use pesticides, including properly responding to reasonable foreseeable problems and situations."

iii. Comments and Responses

Comments. One commenter supported the proposed definition for "competent." Another commenter argued that the definitions of "competent" and "practical knowledge" are unsatisfactory because they raise the question of who determines what counts as practical. The commenter suggested that these definitions require clarity and ought to be grounded in the basic tenets of credentialing practice. The commenter recommended replacing the term "competent" with "competencies" defined as "the collective knowledge, skills, and abilities necessary to perform a job." The commenter recommended replacing "practical knowledge" with "job knowledge," defined as "an article of information job holders need to know in order to perform the job." The commenter recommended adding "job skill" defined as "an acquired proficiency needed to perform a job activity;" "job analysis" defined as "the collection and organization of information about a job in terms of what jobholders do and the qualities they need to possess in order to perform the job-derived from actual jobholders or persons who immediately supervise the work;" and "standard" defined as "a recognized degree of proficiency, as determined by a passing score on a job-related examination."

Response. EPA appreciates the commenter's suggestions to align the definitions with basic credentialing tenets, but does not agree with changing the definitions or adding the terms proposed by the commenter. EPA believes the proposed definitions appropriately contextualize basic credentialing tenets within the framework of FIFRA and the certification of RUP applicators. EPA recognizes that there is an element of subjectivity to these definitions, and expects each certifying authority to exercise its sound judgment in determining—within the parameters set by these definitions and subject to EPA's approval of the certifying authority's certification plan—what is practical and who is competent to apply RUPs.

14. Dealership. i. Existing rule and proposal. The current rule defines dealership, and the definition applies only to dealerships in States or in Indian country where EPA administers the certification plan. EPA proposed to redefine "dealership" to mean "any establishment owned or operated by a restricted use pesticide retail dealer where restricted use pesticides are distributed or sold," and to apply the definition to all situations.

ii. Final rule. EPA is finalizing the definition as proposed.

15. Drone. i. Existing rule and proposal. The term "drone" is not included or defined in the existing or proposed rules.

ii. Final rule. The final rule does not include or define "drone."

iii. Comments and Responses

Comment. One commenter argued that EPA should define the term "drone" because the commenter expects that the use of drones, also known as "Unmanned Aerial Vehicles (UAVs)" in agricultural practices, including for aerial application of pesticides, will increase.

Response. EPA is not defining "drone" in this rulemaking, but may consider it for future rulemaking.

16. Fumigant and Fumigation. i. Existing rule and proposal. The existing rule does not include or define "fumigant" or "fumigation."

EPA proposed to define "fumigant" to mean "any pesticide product that is a vapor or gas, or forms a vapor or gas upon application, and whose pesticidal action is achieved through the gaseous or vapor state", and "fumigation" as "the application of a fumigant".

ii. Final rule. The final rule revises definition of "fumigant," to mean "a restricted use pesticide that bears labeling designating it as a fumigant." The final rule revises the definition of "fumigation" to mean "the use of a fumigant."

3. Comments and Responses

Comments. EPA received comments on these definitions from two certifying authorities, a pesticide manufacturer, an organization of pesticide manufacturers, a pesticide applicator organization, and a university extension program. One commenter supported the proposed definitions. Other commenters opposed the proposed definitions, and two commenters explained that there were programmatic consequences to the proposed definition. For example, some commenters contended that as written, the definitions of fumigation and fumigant would unnecessarily require applicator certification and excessive training and education for non-RUP, low-risk products and prohibit the use by applicators who are now qualified to use them.

Commenters explained that the proposed definition describes products that have fumigant activity (based on their ability to harm plants via vapor drift) but are not fumigants, such as foggers, pest strips, mothballs, and the herbicides 2,4–D and clomazone. One commenter noted that the vast majority of all pesticides form gasses to one degree or another. One commenter requested that the definition be specific to pesticides that are active gasses. Another commenter contended that the proposed definition does not consider materials like phosphides, which do not form a gas upon application but instead release gas as the product reacts with atmospheric moisture. Another commenter argued that vapor and gas are ill-defined terms that mean different things to different people, even among physical chemists. Furthermore, the commenter contends that a product's mode of action (*i.e.*, vapor or gas) is irrelevant. Instead, what is relevant is the risk profile of a pesticide classified as an RUP and a fumigant.

Several commenters offered alternative definitions. One commenter suggested changing the definition to "fumigant means a restricted use pesticide in which the target mode of action is achieved by the product in a gaseous or vapor state or by a reaction to form a gas or vapor." Another

commenter suggested "any pesticide product that is a vapor or gas, or forms a vapor or gas upon application, and whose pesticidal action is achieved through the gaseous or vapor state." One commenter explained the importance of including the phrase "whose pesticidal action is through the gaseous state." This phrase excludes pesticides that vaporize and cause pesticidal action with limited weak movement that does not penetrate commodities or structures in the same way true fumigants do. One commenter argued that EPA could remove the ambiguity of the proposed definition by defining a fumigant as one that is labeled a fumigant. Another noted that because the proposed rule applies only to RUPs, the definition should be "fumigant means a restricted use pesticide whose label classifies the product as a fumigant."

Response. EPA acknowledges that the proposed definition could be interpreted to exceed the intended scope. In response to the comments, EPA defines fumigant for the purposes of this rule as an RUP whose labeling designates it as a fumigant.

17. Immediate and immediately. i. Existing rule and proposal. The terms are not defined in the existing or proposed rules.

ii. Final rule. The final rule does not define the terms "immediate" and "immediately."

iii. Comments and Responses

Comments. Some commenters urged EPA to add a definition for the terms "immediate" or "immediately available" as they apply to the availability of a supervisor of a noncertified applicator. One commenter argued that while in practice adequate supervision is going to vary considerably by site, situation, pesticide being used, geography, abilities of the supervisor, and other factors, the commenter expressed a belief that there is a need to not leave the terms completely open ended. Some commenters suggested defining these terms to allow for the supervisor to be able to arrive at the site of application within three hours of communication from the noncertified applicator, or to be physically present at the site of application. One commenter contended that immediate communication should mean that individuals can contact each other and communicate orally such as a two-way radio or cell phone, but should not include text messaging or voicemail.

Response. EPA has chosen not to define "immediate communication" in the final rule to allow it to be interpreted as needed according to the characteristics of the application and application site. Although some commenters requested a definition, they also explained that there are many variables involved that determine the type of communication, such as the type of application and product applied, geographic locations and distances in remote areas, and the availability of cell phone service. EPA recognizes that some certifying authorities have established definitions for "immediate communication" and expects that those certifying authorities will continue to use their existing definitions, which may include limits on time, distance, and method of communication.

18. Immediate family. i. Existing rule and proposal. The term "immediate family" is not defined in the existing or proposed rules.

ii. Final rule. EPA is adding a definition for "immediate family" to the final rule. This definition is relevant to the exception to the minimum age requirement for noncertified applicators under the direct supervision of private applicators. The final rule defines "immediate family" as it is defined in the revised WPS (40 CFR 170.305). Immediate means familial relationships limited to the spouse, parents, stepparents, foster parents, father-in-law, mother-in-law, children, stepchildren, foster children, sons-in-law, daughters-in-law, grandparents, grandchildren, brothers, sisters, brothers-in-law, sisters-in-law, aunts, uncles, nieces, nephews, and first cousins. "First cousin" means the child of a parent's sibling, *i.e.,* the child of an aunt or uncle.

iii. Comments and Responses

Comments. Some commenters requested an exception or exemption to the proposed minimum age requirements for family farms. As part of the exception, some commenters recommended defining "immediate family" as defined in the Worker Protection Standard (WPS).

Response. EPA considered commenters' requests for an exemption or exception to the minimum age requirement and to use the same definition of "immediate family" as defined in the WPS. In the revised WPS, EPA expanded the definition to include grandparents, grandchildren, some in-laws, cousins, aunts, uncles, nieces and nephews to better reflect the actual patterns of family-based farm ownership in the United States (Ref 36, p. 67540). Because the two regulations cover persons using RUPs in agriculture, EPA agrees that the same definition of immediate family should be applied. In the Certification Rule, EPA has finalized the definition of "immediate family" as the same definition provided in the WPS. See Unit XIII. for a discussion of the exception from the minimum age requirement for a noncertified applicator applying RUPs under the direct supervision of a certified private applicator who is an immediate family member of the noncertified applicator.

19. Indian country. i. Existing rule and proposal. The term "Indian country" is not defined in the existing rule. EPA proposed to define "Indian country" to mean "1. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation. 2. All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State. 3. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same."

ii. Final rule. EPA is adding the term "Indian country" with the definition as proposed.

iii. Comments and responses. See Unit XVII. for a complete discussion of comments and EPA's consideration of the definition of "Indian country" in conjunction with the options for establishing a certification program in Indian country.

20. Indian Tribe or Tribe. i. Existing rule and proposal. The term "Indian Tribe" is not defined in the existing rule. EPA proposed to define "Indian Tribe" or "Tribe" to mean "any Indian or Alaska Native Tribe, band, nation, pueblo, village, or community included in the list of Tribes published by the Secretary of the Interior pursuant to the Federally Recognized Indian Tribe List Act."

ii. Final rule. EPA is finalizing the definition as proposed.

iii. Comments and Responses

Comment. One commenter requested that EPA omit the definition of Indian Tribe in the final rule.

Response. EPA disagrees with the commenter's request to omit the definition. The commenter did not propose a rationale for omitting the definition or alternatives.

21. Mishap. i. Existing rule and proposal. In the existing rule, the term mishap is not defined, but a similar term, "accident," is defined to mean "an unexpected, undesirable event, caused by the use or presence of a pesticide, that adversely affects man or the environment." EPA proposed to replace

the term "accident" with "mishap," defined to mean "an event that may adversely affect man or the environment and that is related to the use or presence of a pesticide, whether the event was unexpected or intentional."

ii. Final rule. The final rule retains the term "mishap," but omits "may" from "may adversely affect." The final definition is "an event that adversely affects man or the environment and that is related to the use or presence of a pesticide, whether the event was unexpected or intentional."

iii. Comments and Responses

Comments. A number of certifying authorities noted that the definition of "accident" is when an adverse event *has* occurred, while the proposed definition of "mishap" would include an adverse event *may have* occurred. Instead of using and defining the term "mishap," the commenters requested that EPA retain the term "accident" as currently defined in 40 CFR 171. Furthermore, one commenter stated that "mishap" appears to be unique to 40 CFR 171. Commenters argued that the new term is unnecessary, could be confused with similar terms already used (*e.g.,* "incident") and is inconsistent with terminology used for pesticide incidents or events. The commenter urged EPA to remove this term, or to revise it to be consistent with existing definitions in the majority of certifying authorities' statutes and regulations.

Response. EPA agrees with commenters that the word "may" does not belong in the definition, as the term mishap is intended to encompass events that *do* adversely affect man or the environment, not events that *may* adversely affect them. The term "accident" usually connotes an unintentional event, but "mishap" encompasses both intentional and unintentional events. EPA believes the broader term is appropriate as used in this rule.

22. Non-target organism. i. Existing rule and proposal. In the existing rule, "non-target organism" means "a plant or animal other than the one against which the pesticide is applied." EPA proposed to redefine "non-target organism" to mean "any plant, animal or other organism other than the target pests that a pesticide is intended to affect."

ii. Final rule. EPA is finalizing the definition as proposed.

23. Noncertified applicator. i. Existing rule and proposal. In the existing rule, "uncertified applicator" means "any person who is not holding a currently valid certification document indicating that he is certified under section 11 of FIFRA in the category of the restricted use pesticide made available for use." EPA proposed to replace uncertified applicator with noncertified applicator, defined as "any person who is not certified in accordance with this part to use or supervise the use of restricted use pesticides in the pertinent jurisdiction, but who is using restricted use pesticides under the direct supervision of a person certified as a commercial or private applicator in accordance with this part."

ii. Final rule. In the final rule, EPA is deleting "uncertified applicator" and revising the proposed definition of "noncertified applicator" to add the phrase "in the category appropriate to the type of application being conducted." In the final rule, "noncertified applicator" means "any person who is not certified in accordance with this part to use or supervise the use of restricted use pesticides in the category appropriate to the type of application being conducted in the pertinent jurisdiction, but who is using restricted use pesticides under the direct supervision of a person certified as a commercial or private applicator in accordance with this part." The change in the definition from the proposal to the final rule was made because a person who is a certified applicator in one category, such as turf and ornamental, would be a noncertified applicator if involved in the application of an RUP in a different category, such as industrial, institutional and structural pesticide control, and therefore would have to work under the supervision of a certified applicator.

24. Ornamental. i. Existing rule and proposal. In the existing rule, "ornamental" means "trees, shrubs, and other plantings in and around habitations generally, but not necessarily located in urban and suburban areas, including residences, parks, streets, retail outlets, industrial and institutional buildings." EPA proposed to redefine the term "ornamental" to mean "trees, shrubs, flowers, and other plantings intended primarily for aesthetic purposes in and around habitations, buildings, and surrounding grounds, including residences, parks, streets, and commercial, industrial, and institutional buildings."

ii. Final rule. EPA is finalizing the definition as proposed.

25. Personal protective equipment. i. Existing rule and proposal. In the existing rule, "protective equipment" means "clothing or any other materials or devices that shield against unintended exposure to pesticides." EPA proposed to replace "protective equipment" with "personal protective equipment" and define it to mean "devices and apparel that are worn to protect the body from contact with pesticides or pesticide residues, including but not limited to, coveralls, chemical-resistant suits, chemical-resistant gloves, chemical-resistant footwear, respirators, chemical-resistant aprons, chemical-resistant headgear, and protective eyewear."

ii. Final rule. EPA is finalizing the definition of "personal protective equipment" as proposed.

26. Principal place of business. i. Existing rule and proposal. In the existing rule, "principal place of business" means "the principal location, either residence or office, in the State in which an individual, partnership, or corporation applies pesticides." This definition only applies to dealers, dealerships and transactions in States or on Indian Reservations where EPA directly administers a pesticide applicator certification program. EPA proposed to redefine "principal place of business" to mean "the principal location, either residence or office, where a person conducts a business of applying restricted use pesticides. A person who applies restricted use pesticides in more than one State or area of Indian country may designate a location within a State or area of Indian country as its principal place of business for that State or area of Indian country."

ii. Final rule. EPA is finalizing the proposed definition with one revision to replace "business of applying RUPs" with "business that involves the use of RUPs." The final definition is "*Principal place of business* means the principal location, either residence or office, where a person conducts a business that involves the use of restricted use pesticides. A person who applies restricted use pesticides in more than one State or area of Indian country may designate a location within a State or area of Indian country as its principal place of business for that State or area of Indian country."

27. Regulated pest. i. Existing rule and proposal. In the existing rule, "regulated pest" means "a specific organism considered by a State or Federal agency to be a pest requiring regulatory restrictions, regulations, or control procedures in order to protect the host, man and/or his environment." EPA proposed to revise the definition of "regulated pest" to "a particular species of pest specifically subject to Tribal, State or Federal regulatory restrictions, regulations, or control procedures

intended to protect the hosts, man and/or the environment.''

ii. Final rule. EPA is finalizing the definition as proposed.

28. Restricted use pesticide. i. Existing rule and proposal. In the existing rule, ''restricted use pesticide'' is defined as ''a pesticide that is classified for restricted use under the provisions of section 3(d)(1)(C) of the Act.'' EPA proposed to revise the definition of ''restricted use pesticide'' to be ''a pesticide that is classified for restricted use under the provisions of FIFRA section 3(d).''

ii. Final rule. In the final rule, EPA is revising the definition of ''restricted use pesticide'' to be more complete. The definition in the final rule is ''restricted use pesticide'' means ''a pesticide that is classified for restricted use under the provisions of section 3(d) of FIFRA and 40 CFR part 152, subpart I.''

29. Restricted use pesticide retail dealer. i. Existing rule and proposal. In the existing rule ''restricted use pesticide dealer'' means ''any person who makes available for use any restricted use pesticide, or who offers to make available for use any such pesticide.'' EPA proposed to replace ''restricted use pesticide dealer'' with ''restricted use pesticide retail dealer'' and to define it to mean ''any person who distributes or sells restricted use pesticides to any person, excluding transactions solely between persons who are pesticide producers, registrants, wholesalers, or retail sellers, acting only in those capacities.''

ii. Final rule. EPA is finalizing the definition as proposed.

iii. Comments and Responses

Comments. A few certifying authorities supported the inclusion of a restricted use pesticide retail dealer definition, and recommended clearer wording, such as ''means any person who is engaged in the business of distributing, selling, offering for sale, or holding for sale restricted use pesticides for distribution directly to users.'' One certifying authority offered as an alternative definition, ''any person who is engaged in the wholesale or retail sale of restricted use pesticides.''

Response. EPA is finalizing the proposed definition. The phrase ''distribute or sell'' is defined in FIFRA, 7 U.S.C. 136(gg), and includes all of the activities in the first suggested definition as well as others, so it is more clear for the definition to use the language from FIFRA. The final definition correctly excludes certain transactions, which could be included in ''wholesale or retail sale'' of RUPs.

30. Toxicity. i. Existing rule and proposal. In the existing rule, the term ''toxicity'' means ''the property of a pesticide to cause any adverse physiological effects.'' EPA proposed to redefine ''toxicity'' to mean ''the property of a pesticide that refers to the degree to which the pesticide and its related derivative compounds are able to cause an adverse physiological effect on an organism as a result of exposure.''

ii. Final rule. EPA is revising this definition to be ''toxicity'' means ''the property of a pesticide that refers to the degree to which the pesticide, and its degradates and metabolites, are able to cause an adverse physiological effect on an organism.''

31. Under the direct supervision of. i. Existing rule and proposal. In the existing rule at § 171.2(a)(28) EPA defines the term ''under the direct supervision of'' to mean the act or process whereby the application of a pesticide is made by a competent person acting under the instructions and control of a certified applicator who is responsible for the actions of that person and who is available if and when needed, even though such certified applicator is not physically present at the time and place the pesticide is applied. ''Direct supervision'' is not defined in the existing or proposed rules.

ii. Final rule. EPA is deleting ''under the direct supervision of'' and is not codifying a definition of the term ''direct supervision'' in the final rule.

iii. Comments and Responses

Comments. EPA received comments from two certifying authorities. One commenter requested a definition for ''direct supervision'' and suggested that the term ''under the direct supervision of'' be defined to mean ''the act or process whereby the application of a pesticide is made by a competent person acting under the instructions and control of a certified applicator who is responsible for the actions of that person and who is available if and when needed, even though such certified applicator is not physically present at the time and place the pesticide is applied.'' Another commenter noted that their State definition of direct supervision differs from the federal in that the State requires the physical presence of a certified applicator within line of sight or hearing distance of a non-certified applicator using RUPs in a private application setting or any category pesticide in a commercial application setting.

Response. EPA appreciates the interest from commenters, but EPA's discretion to interpret ''under the direct supervision of a certified pesticide applicator'' is constrained by FIFRA section 2(e)(4), which provides that ''unless otherwise prescribed by its labeling, a pesticide shall be considered to be applied under the direct supervision of a certified applicator if it is applied by a competent person acting under the instructions and control of a certified applicator who is available if and when needed, even though such certified applicator is not physically present at the time and place the pesticide is applied.'' Because of this statutory definition, it is not necessary to define either term in the final rule.

32. Use. i. Existing rule and proposal. The existing rule does not define ''use''. EPA proposed to define ''use'' as in ''to use a pesticide'' means any of the following:

(a) Pre-application activities involving mixing and loading the pesticide.

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

(c) Other pesticide-related activities, including, but not limited to, transporting or storing pesticide containers that have been opened, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other pesticide-containing materials.

ii. Final rule. The final rule differs from the proposed definition in that it omits the proposed pre-application activities except for mixing and loading and adjusts the wording of paragraph (c) to be consistent with the description of ''other pesticide-related activities'' in the WPS definition of use in 40 CFR 170.305. The final definition is: *Use, as in ''to use a pesticide''* means ''any of the following:

(a) Pre-application activities involving mixing and loading the pesticide.

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

(c) Other pesticide-related activities, including, but not limited to, transporting or storing pesticide containers that have been opened, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other pesticide-containing materials.''

iii. Comments and Responses

Comments. Many certifying authorities, organizations of certifying authorities, some applicator organizations, farm bureaus, and university extension programs commented on the definition of ''use''. All commenters were opposed to the

proposed definition. Many commenters addressed consequences of the change, while others offered suggestions to change the definition.

Many commenters argued the definition of "use" was too broad and expansive. A few commenters expressed concern that certifying authorities would have to change their definition of "use" in their law, or it could be outside of the scope of their charter. There was some concern on the part of one commenter about the impacts to certifying authorities' staff time and resources to make such changes since the definition change has far reaching implications involving other elements of a regulatory program. Another commenter asked whether EPA would expand the label instructing "users" on how to perform the listed pre- and post-application activities like arranging for the application and cleaning equipment and whether the definition of "misuse" would be redefined to correspond with the new definition of "use". Another commenter contended that in some States the definition would apply equally to users of restricted and non-RUPs. As a result, it would be unmanageable to enforce pre- or post-use requirements of non-restricted pesticide use, on individuals who are not required by certifying agencies to be licensed or to maintain records.

A number of commenters argued that the proposed definition of 'use' should be limited to activities where an individual has the potential for exposure to pesticides, specifically the actions involved in the application or direct handling (*i.e.*, mixing, loading, dispersing and disposing) of pesticides. One commenter asked that the definition include only individuals involved in the actual application. Some commenters contend that the written definition should specifically exclude all activities that cannot or do not lead to direct exposure to the pesticide product itself, pesticide containers, or pesticide residues.

Many commenters took issue with the inclusion of most pre-application activities in the proposed definition. One commenter contended that including pre-application decisions or activities in the term "use" is not consistent with how this term is used in other parts of FIFRA, especially where "use inconsistent with the label" is perhaps the most frequently-used violation used for enforcement purposes. 7 U.S.C. 136j. Many pesticide applicator organizations, some certifying authorities, university extension programs and farm bureaus, and a couple of certifying authority organizations were strongly opposed to including "arranging for the application of a pesticide" in the definition. One commenter believes that in States where the "end user" is responsible for the proper use of the pesticide, some of the activities in the proposed definition (*i.e.*, arranging for the application of the pesticide) may not be conducted by the end user and may therefore be unenforceable by the State. Commenters argued that arranging for the application involves individuals who may never come into contact with an RUP, such as truckers, staff at a pest control firm, consultants, sales staff, veterinarian clinical staff, entomologists, arborists, farmers who hire pesticide applicators and homeowners. Generally, such pre-application activities are not referenced on the pesticide product label. Instead, commenters stated that "use" should only refer to activities listed in existing label language under directions for use. Also, it would be difficult to enforce and costly to investigate violations for each instance of a pesticide application.

Some commenters thought post-application activities would also be difficult to comply with and enforce, such as transporting open containers. It is unclear what part of "transportation" is being addressed and the use violation EPA is trying to prevent. As is, the scope of the definition would include anyone who is cleaning equipment, simply storing pesticide containers that have been opened or even washing shovels used in spill cleanup. One commenter opposed the inclusion of post-application activities of transporting opened containers, and disposing of equipment wash water and other materials contaminated with pesticides.

Commenters disliked other parts of the definition of "use." Specifically, some were against including responsibilities related to providing training, a copy of a label and use-specific instructions to noncertified applicators. They explained that trainers, industry experts, and corporate partners would have to become certified applicators of RUPs. One commenter asserted that only certified applicators could train noncertified applicators if training was part of "use." One commenter opposed a reference to the WPS in the definition. Another commenter argued that including "disposal of waste water" in the definition of use would require facilities to make modifications and that this requirement was not considered in the EPA's assessment of financial impact. In addition, one applicator association argued that properly rinsed containers and properly cleaned equipment should not be included within the term "use" because the contaminants have been removed. One commenter opposed use of the phrase "including, but not limited to" in the proposed definition of "use" because it is open to interpretation by a regulator, trainer and applicator and makes it difficult to comply with and enforce.

Suggestions to change the definition were offered by some certifying authorities and their organization, some university extension programs, and a few worker/handler advocacy organizations. These commenters mostly favored including broad activities directly related to the application or handling of pesticides. Similarly, some commenters argued that the definition of "use" should include activities related to handling open or empty containers, following label directions, disposing of rinsate or leftover pesticides and similar activities, and the direct application of pesticides, and should not include any other handling procedures related to the pesticide. One State suggested their definition of "use" which includes the "loading, transport, storage or handling after manufacturer's seal is broken . . ." One commenter suggested broadly defining "use" such as ". . . the application of a pesticide in the production of agricultural crops or other purposes by a pesticide applicator."

Response. In response to commenters' concerns, EPA revised the final definition of "use" so it is not as broad or far reaching as the proposed definition. The final definition limits the pre-application activities to mixing and loading the pesticide rather than the longer list of activities included in the proposed definition and in the WPS definition. EPA generally agrees with commenters that activities such as arranging for the pesticide application do not have to be done by a certified applicator or a noncertified applicator working under their supervision.

The final definition retains the proposed activities regarding opened containers, cleaning equipment and disposal but changes the heading to "Other pesticide-related activities" and revising the wording to be consistent with the WPS definition. Transporting and storing opened containers, and disposal of pesticides and pesticide containers are all part of the core standards of competency for private, commercial and noncertified applicators as safety measures to avoid or minimize adverse health effects. While not in the competency standards, the activities of cleaning equipment and disposing of equipment wash waters may expose the persons engaging in those activities to pesticides and their residues.

Commenters who are concerned about any possible inconsistencies between the federal and certifying authorities' definition of "use" are reminded that in the context of this rule, "use" is associated with RUPs only. Certifying authorities that currently do not distinguish between RUP and non-RUP applicators may reconsider whether such a distinction is more appropriate in the context of this final rule.

EPA appreciates the suggested changes to phrases used in the proposed definition. However, EPA does not agree that the suggested phrase "after the manufacturer's seal is broken" is substantially different from the phrase in the definition "containers that have been opened". Both can refer to either containers that are open or containers that have been opened and closed by the user, but are no longer in the same condition as at the time of purchase. EPA has chosen to retain the language "containers that have been opened". The definition suggested by another commenter, "the application of a pesticide in the production of agricultural crops or other purposes by a pesticide applicator" is too general and does not encompass mixing, loading or the other-pesticide related activities that present exposure concerns. EPA maintains that the final definition sufficiently and adequately includes the main activities of applicators in the application and handling of pesticides, and their residues and containers that present significant concerns for exposure and risk to users, the public, and the environment.

The final definition of "use" retains the phrase "including but not limited to", because it is neither necessary nor practical to specify every aspect of pesticide use that is addressed—or could in the future be addressed—on pesticide labeling.

33. Use-specific instructions. i. Existing rule and proposal. The existing rule does not define the term "use-specific instructions". EPA proposed to define "use-specific instructions" to mean "the information and requirements specific to a particular pesticide product or work site that are necessary in order for an applicator to use the pesticide in accordance with applicable requirements and without causing unreasonable adverse effects."

ii. Final rule. In the final rule, EPA is revising the definition by replacing "that are necessary in order for an applicator to" with "that a user needs in order to." The definition of "use-specific instructions" is "the information and requirements specific to a particular pesticide product or work site that a user needs in order to use the pesticide in accordance with applicable requirements and without causing unreasonable adverse effects."

B. Restructuring of 40 CFR Part 171

1. Existing rule and proposal. The existing rule is a single part with no subparts. The first sections (40 CFR 171.1 through 171.6) describe the standards for commercial and private applicators, and the requirements for persons working under the direct supervision of a certified applicator; they also include definitions and a statement of purpose. The second half of the existing rule (40 CFR 171.7 through 171.11) describes the procedures for States, Tribes, Federal agencies, and EPA to administer certification programs. The existing rule has a section titled "Government Agency Plan" describing a certification plan covering the entire Federal government that has not been developed or implemented.

EPA proposed to reorganize the rule into four subparts: "General Provisions"—scope, definitions and effective date, "Certification Requirements for Applicators of Restricted Use Pesticides"—all standards for the certification and recertification of commercial and private applicators, "Supervision of Noncertified Applicators"—all relevant standards for the certified applicator and the noncertified applicator using RUPs under his or her direct supervision, and "Certification Plans"—requirements for States, Tribes and Federal agencies to submit and modify their certification plans, as well as a description of an EPA-administered applicator certification plan.

2. Final rule. EPA is adopting the new structure as proposed.

3. Comment and response. EPA received one comment expressing general support for proposal to restructure the rule. EPA is codifying the proposed restructuring scheme.

XX. Implementation

A. Proposal

EPA proposed to make the final rule effective 60 days after the final rule is published in the **Federal Register**. EPA proposed to require States, Tribes, and Federal agencies administering EPA-approved certification plans to submit amended certification plans to EPA for approval within two years of the effective date of the final rule. EPA proposed to review and respond to all certification plans submitted within 2 years. Therefore, EPA proposed to allow existing certification plans to remain in effect for up to four years from the effective date of the final rule. After four years, a State, Tribe, Federal agency, and EPA would be permitted to certify applicators of RUPs only if they have an EPA-approved certification plan that meets or exceeds all of the applicable requirements of the final rule. The proposal included a provision allowing existing certification plans to remain in effect until EPA approved the revised certification plan if the certifying authority had submitted the plan to EPA but EPA had not completed its review of the plan within the proposed timeframe.

B. Final Rule

The final rule is effective 60 days after the date the rule is published in the **Federal Register**, March 6, 2017, as proposed. The final rule adjusts the proposed implementation timeframe to provide certifying authorities additional flexibility. Existing certification plans approved by EPA before the effective date of the rule will remain in effect until three years after the effective date of the final rule; if a certifying authority submits an amended certification plan to EPA for approval within three years of the effective date of the final rule, its existing certification plan will remain in effect until EPA has reviewed and responded to the amended certification plan, but no longer than two more years, unless EPA authorizes further extension in its approval of an amended certification plan. In its approval of an amended certification plan, EPA will specify how much longer the existing plan may remain in effect while the certifying authority prepares to implement its amended certification plan. EPA will base each certifying authority's implementation period on the particular circumstances of that jurisdiction, but anticipates that most certifying authorities will be allowed two years from the date of EPA approval to implement the plan.

There are currently two EPA-administered certification plans, the EPA Plan for Federal Certification of Applicators of Restricted Use Pesticides Within Indian Country and the Federal Plan for Certifying Applicators in Navajo Indian Country. EPA intends to revise these plans to conform to the final rule no later than the dates applicable to existing plans in 171.5, and these plans will remain in effect consistent with 171.5.

C. Comments and Responses

Comments. Two certifying authorities supported the proposed timeline. Many other States, certifying authority associations, university extension

programs, Tribes, some applicator associations, a farm bureau and few individuals opposed the proposed schedule and requested more time to submit certification plans, to allow for regulatory changes, and to implement the changes. Commenters contended it would take a tremendous amount of time and resources to make legislative and regulatory changes. According to a survey of certifying authorities by their associations, 34% of all certifying authorities indicated that they would need to revise regulations while 64% would have to revise both laws and regulations. Many certifying authorities explained their process and estimated timelines for making such changes, demonstrating a tremendous variety in timeframes and process among all programs. Some examples of steps in certifying authorities' processes that would make it difficult to revise the certification plan in the proposed timeframe:

- Engage in local legislative initiatives
- Hold public hearings
- Have final statutory and regulatory changes in place before submitting the revised certification plan to EPA
- Engage legislature on statutory revisions, which can require multiple exchanges; some legislatures meet on a biennial schedule so revised statutes take 2 years to enact.

Some commenters were concerned that opening up statutes and regulations would increase the possibility of other changes being introduced. In all, comments demonstrated the complex nature of legislative and regulatory change that would be necessary to implement revised certification plans.

Certifying authorities also commented that EPA's plan to develop and provide training materials and exams to support implementation would not relieve them of the burden and many resources needed to implement changes.

Many certifying authorities and their organizations emphasized that EPA underestimated the amount of resources in staff and time to coordinate and implement legislative and regulatory change.

Commenters requested that EPA articulate in the final rule that during the entire period for certification plan development and submission, and during EPA's review of submitted plans, there will be open and transparent negotiations with the certifying authorities. These commenters asserted that without such a discussion, certifying authorities would have a much harder time convincing the elected officials that the federal rule is warranted. Commenters also requested that EPA include in the final rule a clear and understandable outline showing the expected process by which the certifying authority and EPA will work toward a mutually acceptable outcome. Commenters also raised questions about the consequences to the certifying authority if EPA cannot accept the revised certification plan.

Responses. EPA recognizes that implementing the final rule will require cooperation with each certifying authority. EPA intends to engage in open and transparent discussions and negotiations with certifying authorities as they develop revised certification plans and during EPA's review of the revised certification plans to ensure the certifying authority has adequate feedback to develop and submit a plan that EPA can approve and that meets the needs of the certifying authority. The submission, review, and negotiation process will involve the certifying authority, appropriate EPA Regional office (for States and Tribes), and EPA's Office of Pesticide Programs. EPA will establish an internal workgroup with participants from EPA headquarters and Regional offices for the review of certification plans that will provide nationally-consistent oversight and guidance, and answer any questions that arise during the process.

EPA recognizes that certifying authorities and pesticide safety education programs will need to devote resources to additional training, manual development, exam development and review, exam administration, and other services that support certification and education of pesticide applicators in conformance with the final rule. EPA will continue to give priority to funding the States and Tribes for these programs through the State and Tribal Assistance Grants program. In addition, EPA is committed to working with the States and Tribes to provide resources and assistance to alleviate burdens as EPA's budget allows, such as by supporting development of training materials and exams that can be adopted in whole or part by States and Tribes for use in certification and training programs. Further, EPA will continue to provide funding to pesticide safety education programs from service fees collected under the Pesticide Registration Improvement Act and subsequent reauthorizations. Under the existing law, EPA must commit at least $500,000 of the funds collected by EPA related to pesticide registration-related actions to support the pesticide safety education program.

In response to commenters' concerns, EPA has adopted a final rule with options for more flexible time frames. The final rule lengthens the time for certifying authorities to submit revised plans and allows EPA discretion to grant certifying authorities more or less than two years to implement newly approved plans. Certifying authorities will have three years to revise and submit their certification plans.

The final rule adds a provision to grant conditional approval of certification plans. Certifying authorities unable to complete necessary legislative and regulatory changes before submitting their new certification plan would be allowed to submit a draft plan conditioned upon those changes becoming effective. EPA expects certifying authorities to submit a written request for conditional approval with a justification and anticipated time frame. EPA will grant conditional approvals to certifying authorities in writing.

When EPA approves a plan, conditionally or unconditionally, it will establish and implementation schedule specific to that approved plan. EPA anticipates that most certifying authorities will be allowed two years from the date of EPA approval to implement the plan, but may set shorter or longer implementation periods as circumstances warrant. EPA will develop a process for certifying authorities to follow when submitting a draft or final certification plan and notifying EPA of final implementation.

In response to commenters' questions about the status of a certification program if EPA does not approve the revised certification plan, EPA emphasizes that it plans to work jointly with each certifying authority to develop a workable certification plan that can be implemented in the jurisdiction and that meets EPA's standards. Decisions on certification plans will be made on a case-by-case basis. The process for EPA administering a certification plan is outlined in 40 CFR 171.311.

XXI. References

The following is a listing of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

1. EPA. Economic Analysis of Final Revisions to the Applicator Certification Regulation. 2016.

2. EPA. Response to Comment on the Proposed Changes to the Certification of Pesticide Applicators Rule. 2016.
3. EPA. Final EPA Plan for the Federal Certification of Applicators of Restricted Use Pesticides Within Indian Country; Notice of Implementation. Notice. **Federal Register** (79 FR 7185, February 6, 2014) (FRL–9904–18).
4. EPA. Federal Plan for Certification of Restricted Use Pesticide Applicators in Navajo Indian Country; Notice of Implementation; and Announcement of Availability of Form to Request Pesticide Applicator Certification in Navajo Indian Country. Notice. **Federal Register** (72 FR 32648, June 13, 2007) (FRL–8078–9).
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17. EPA. Pesticides; Certification of Pesticide Applicators. Proposed Rule. **Federal Register** (80 FR 51356, August 24, 2015) (FRL–9931–83).
18. EPA. Certification Plan and Reporting Database. *http://cpard.wsu.edu/reports/menu.aspx.*
19. EPA. Certification of Pesticide Applicators. 40 CFR part 171. **Federal Register** (39 FR 36446, October 9, 1974) (FRL–269.1).
20. EPA. Submission and Approval of State Plans for Certification of Commercial and Private Applicators of Restricted Use Pesticides. **Federal Register** (40 FR 11698, March 12, 1975) (FRL–340.6).
21. EPA. Federal Certification of Pesticide Applicators in States or Indian Reservations Where There is No Approved State or Tribal Certification Plan in Effect. Final Rule. **Federal Register** (43 FR 24834, June 8, 1978) (FRL–881–7).
22. EPA. Certification of Pesticide Applicators; Expansion of Recertification Time Period. Final Rule. **Federal Register** (48 FR 29854, June 29, 1983) (FRL–2338–8).
23. EPA. Certification of Pesticide Applicators; Recordkeeping and Reporting Requirements. Final Rule. **Federal Register** (48 FR 53972, November 29, 1983) (FRL–2402–7).
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XXII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.epa.gov/laws-regulations/laws-and-executive-orders.*

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

This action is a significant regulatory action and was therefore submitted to the Office of Management and Budget (OMB) for review under Executive Order 12866 (58 FR 51735, October 4, 1993) and Executive Order 13563 (76 FR 3821, January 21, 2011). A changes made in response to OMB recommendations received during that review have been documented in the docket. In addition, EPA prepared an Economic Analysis of the potential costs and benefits associated with this action, which is available in the docket and summarized in Unit II.C. (Ref. 1).

B. Paperwork Reduction Act (PRA)

The information collection activities in this rule have been submitted to OMB for approval under the PRA, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document that EPA prepared has been assigned EPA ICR No. 2499.02 and OMB Control No. 2070–0196 (Ref. 51). You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

The information collection activities related to the existing certification rule are already approved by OMB in an ICR titled "Certification of Pesticide Applicators" (EPA ICR No. 0155.10; OMB Control No. 2070–0029). Therefore, EPA ICR number 2499.02 only addresses the changes to the existing certification rule. These include:

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

Respondents/affected entities: Certified applicators; private and commercial. The number of applicators is based on the Certification Plan and Reporting Database for the years 2009 to 2014 (CPARD, 2015), there are 420,999 commercial applicators and 482,925 private applicators.

Noncertified applicators under the direct supervision of certified applicators. It is estimated that there are 918,892 noncertified applicators who apply RUPs under the direct supervision of commercial certified applicators, and there are 28,092 noncertified applicators who apply RUPs under the direct supervision of private certified applicators.

RUP dealers. EPA estimates that there are approximately 10,000 retail dealers. According to the Agricultural Retailers Association, there are approximately 9,000 agricultural retailers in the United States. Not all are licensed to sell RUPs. EPA estimates that there are far fewer nonagricultural pesticide retailers licensed to sell RUPs, given that more RUPs are registered for agricultural use than for other uses.

Authorized agencies. Authorized agencies, termed certifying authorities in the final rule, are the entities that are authorized by EPA to administer applicator certification plans under 40 CFR part 171. Authorized agencies includes States, territories, federally recognized Tribes and Federal agencies authorized to operate certification programs. Authorized agencies administer certification plans in 50 States, the District of Columbia, and 6 territories (Puerto Rico, U.S. Virgin Islands, American Samoa, Guam, Commonwealth of Northern Mariana Islands, and the Republic of Palau). In addition, there are four approved Tribal certification plans and five approved Federal agency certification plans. The Federal agencies administering certification plans are DOD, DOE, USDA APHIS PPQ, USDA Forest Service (the two USDA plans are separate plans), and DOI (the DOI plan covers three agencies within DOI BLM, BIA and NPS, but no others). EPA administers two certification plans, but is not included as a respondent because the burden to EPA is estimated separately. Wage rates vary according to the entity.

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

Estimated number of respondents: 1,860,974.

Frequency of response: Rule familiarization is expected to occur annually for the first 3 years. Revising and submitting certification plans will occur one time. Training of noncertified applicators will occur annually. Recordkeeping of RUP sales will occur each time an RUP is sold, which EPA estimates will be 195 times per year per RUP dealer.

Total estimated burden: 2,280,849 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $68,573,790 (per year), which includes $0 annualized capital or operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

C. Regulatory Flexibility Act (RFA)

Pursuant to section 605(b) of the RFA, 5 U.S.C. 601 *et seq.*, I certify that promulgation of the requirements contained in this final rule will not have a significant economic impact on a substantial number of small entities. There are two types of small entities subject to the requirements of this action: Small farms with private applicators and noncertified applicators using RUPs under their direct supervision, and small firms employing commercial applicators and noncertified applicators using RUPs under their direct supervision. EPA estimates that up to 820,000 small farms use pesticides and may be affected by the rule, although not all will use RUPs. EPA further estimates that at least 167,000 small firms employing commercial applicators may be affected by the rule. The Agency has determined that for private applicators, the average impact of the rule is about $25 per year and represents less than 1% of annual sales revenue for the average small farm and even to small-small farms with sales of less than $10,000. Costs to small firms employing commercial applicators are estimated to average less than $100 per year, which is less than 1% of average annual revenue for these firms.

Impacts to the smallest farms, especially in high-impact States such as Alaska, Kentucky, and Rhode Island, where costs could be around $100 per year, could exceed 1% of annual sales revenue. However, the number of farms facing such impacts is small relative to the number of small farms affected by the rule. EPA estimates that around 13,000 farms may face impacts of one percent or more of annual revenue. These farms comprise less than one percent of all 1.5 million small farms and less than two percent of all 820,000 small farms that use pesticides that may be affected by the rule. For small firms employing commercial applicators, average impacts of the rule represent less than 0.1% of annual revenue for the average small firm. Even for the high cost scenarios, where costs might be as high as $474 per year, the impacts are expected to be 0.3% or less of annual revenues. Details of this analysis are presented in the Economic Analysis (Ref. 1).

Although not required by the RFA to convene a Small Business Advocacy Review (SBAR) Panel because the EPA has determined that this action would not have a significant economic impact on a substantial number of small entities, the EPA originally convened a panel to obtain advice and recommendations from small entity representatives potentially subject to this rule's requirements. A copy of the SBAR Panel Report (Ref. 29) is included in the docket for this rulemaking.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531 through 1538, and does not significantly or uniquely affect small governments. As such, the requirements of sections 202, 203, 204, or 205 of UMRA do not apply to this action.

E. Executive Order 13132: Federalism

This action does not have federalism implications, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

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

This action does not have Tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). This action requires Tribes that certify applicators to perform RUP applications in Indian country to comply with the revised regulation. EPA currently directly administers a national certification plan for Indian country (Ref. 3) and has implemented a specific certification plan for the Navajo Nation (Ref. 4). This rule provides Tribes with the option to develop and administer their own applicator certification programs, to participate in the EPA-administered applicator certification program for Indian country, or to enter into an agreement with EPA regarding administration of an applicator certification program. As explained in Unit XVII., EPA does not believe the revisions would place any unreasonable burden on Tribes because the rule does not require Tribes to implement certification programs. There are currently only four Tribes with EPA-approved certification plans. The rule requires existing Tribal certification plans to be revised and resubmitted to EPA for review and approval. EPA estimates the costs to these Tribes would be similar to the costs to States for updating and submitting to EPA for approval a revised certification plan, and that they would not result in a significant impact on Tribal entities or programs. Thus, Executive Order 13175 does not apply to this action.

Consistent with EPA's Policy on Consultation and Coordination with Indian Tribes, EPA consulted with Tribal officials during the development of this action. A summary of that consultation is provided in the docket for this action (Ref. 30).

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

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not an economically significant regulatory action as defined by Executive Order 12866. Information on EPA's consideration of the risks to children in development of this action can be found in Unit III.C.3. and in the Economic Analysis for this action (Ref. 1). EPA nevertheless believes that the environmental health or safety risks addressed in this rule could have a disproportionate effect on children.

The primary risk to children that is within the scope of this rulemaking is exposure to RUPs during their work as applicators of RUPs. The rule is intended to minimize these exposures and risks. By establishing a minimum age for persons to become a certified applicator or to use RUPs as a noncertified applicator under the direct supervision of a certified applicator, children would receive less exposure to pesticides that may lead to chronic or acute pesticide-related illness. In addition, the final rule expands training for noncertified applicators to include topics that should also assist in reducing potential risks to children from incidental pesticide exposure, such as avoiding bringing pesticide residues home on clothing.

Like DOL's regulations that implement the FLSA, the rule regulates the ages at which children can apply pesticides. The final rule establishes a minimum age of 18 for persons to

become certified to apply RUPs and to apply RUPs as noncertified persons under the direct supervision of certified applicators, except that a noncertified person using agricultural RUPs under the direct supervision of a private applicator who is also a member of the noncertified applicator's immediate family must be 16 years old. Since many RUPs present heightened risks to harm human health relative to other pesticides, EPA feels that they warrant additional risk mitigation measures beyond those applicable to non-RUPs. EPA expects that the establishment of minimum ages will mitigate or eliminate many risks faced by young applicators of RUPs.

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

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

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards that would require Agency consideration under NTTAA section 12(d), 15 U.S.C. 272 note.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

This action is not expected to have disproportionately high and adverse human health or environmental effects on minority or low-income populations, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). This action will increase the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

K. Congressional Review Act (CRA)

This action is subject to the CRA (5 U.S.C. 801 *et seq.*), and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 171

Environmental protection, Applicator competency, Agricultural worker safety, Certified applicator, Pesticide safety training, Pesticide worker safety, Pesticides and pests, Restricted use pesticides.

Dated: December 12, 2016.

Gina McCarthy,

Administrator.

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

PART 171—[AMENDED]

■ 1. The authority citation for part 171 continues to read as follows:

Authority: 7 U.S.C. 136–136y.

■ 2. Add a new heading for subpart A to read as follows:

Subpart A—General Provisions

■ 3. Revise § 171.1 to read as follows:

§ 171.1 Scope.

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

(b) A person is a certified applicator for purposes of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), 7 U.S.C. 136 *et seq.*, only if the person holds a certification issued pursuant to a plan approved in accordance with this part and currently valid in the pertinent jurisdiction. As provided in FIFRA section 12(a)(2)(F), it is unlawful for any person to make available for use or to use any pesticide classified for restricted use other than in accordance with the requirements of this part.

§ 171.2 [Reserved]

■ 4. Remove § 171.2.

■ 5. Revise § 171.3 to read as follows:

§ 171.3 Definitions.

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

Agricultural commodity means any plant, fungus, or algae, or part thereof, or any animal or animal product, produced by a person (including, but not limited to, farmers, ranchers, vineyardists, plant propagators, Christmas tree growers, aquaculturists, floriculturists, orchardists, foresters, or other comparable persons) primarily for sale, consumption, propagation, or other use by man or animals.

Agency means the U.S. Environmental Protection Agency (EPA), unless otherwise specified.

Application and *applying* means the dispersal of a pesticide on, in, at, or directed toward a target site.

Applicator means any individual using a restricted use pesticide. An applicator may be certified as a commercial or private applicator as defined in FIFRA or may be a noncertified applicator as defined in this part.

Calibration means measurement of dispersal or output of application equipment and adjustment of such equipment to establish a specific rate of dispersal and, if applicable, droplet or particle size of a pesticide, and/or equalized dispersal pattern.

Certification means a certifying authority's issuance, pursuant to this part, of authorization to a person to use or supervise the use of restricted use pesticides.

Certifying authority means the Agency, or a State, Tribal, or Federal agency that issues restricted use pesticide applicator certifications pursuant to a certification plan approved by the Agency under this part.

Compatibility means the extent to which a pesticide can be combined with other chemicals without causing undesirable results.

Competency means having the practical knowledge, skills, experience, and judgment necessary to perform functions associated with restricted use pesticide application without causing unreasonable adverse effects, where the nature and degree of competency required relate directly to the nature of the activity and the degree of independent responsibility.

Dealership means any establishment owned or operated by a restricted use pesticide retail dealer where restricted use pesticides are distributed or sold.

Fumigant means a restricted use pesticide that bears labeling designating it as a fumigant.

Fumigation means the use of a fumigant.

Immediate family means familial relationships limited to the spouse, parents, stepparents, foster parents, father-in-law, mother-in-law, children, stepchildren, foster children, sons-in-law, daughters-in-law, grandparents, grandchildren, brothers, sisters, brothers-in-law, sisters-in-law, aunts, uncles, nieces, nephews, and first cousins. "First cousin" means the child

of a parent's sibling, *i.e.*, the child of an aunt or uncle.

Indian country means:

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

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

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

Indian Tribe or *Tribe* means any Indian or Alaska Native Tribe, band, nation, pueblo, village, or community included in the list of Tribes published by the Secretary of the Interior pursuant to the Federally Recognized Indian Tribe List Act.

Mishap means an event that adversely affects man or the environment and that is related to the use or presence of a pesticide, whether the event was unexpected or intentional.

Nontarget organism means any plant, animal or other organism other than the target pests that a pesticide is intended to affect.

Noncertified applicator means any person who is not certified in accordance with this part to use or supervise the use of restricted use pesticides in the category appropriate to the type of application being conducted in the pertinent jurisdiction, but who is using restricted use pesticides under the direct supervision of a person certified as a commercial or private applicator in accordance with this part.

Ornamental means trees, shrubs, flowers, and other plantings intended primarily for aesthetic purposes in and around habitations, buildings and surrounding grounds, including residences, parks, streets, and commercial, industrial, and institutional buildings.

Personal protective equipment means devices and apparel that are worn to protect the body from contact with pesticides or pesticide residues, including, but not limited to, coveralls, chemical-resistant suits, chemical-resistant gloves, chemical-resistant footwear, respirators, chemical-resistant aprons, chemical-resistant headgear, and protective eyewear.

Practical knowledge means the possession of pertinent facts and comprehension sufficient to properly perform functions associated with use of restricted use pesticides, including properly responding to reasonably foreseeable problems and situations.

Principal place of business means the principal location, either residence or office, where a person conducts a business that involves the use of restricted use pesticides. A person who applies restricted use pesticides in more than one State or area of Indian country may designate a location within a State or area of Indian country as its principal place of business for that State or area of Indian country.

Regulated pest means a particular species of pest specifically subject to Tribal, State or Federal regulatory restrictions, regulations, or control procedures intended to protect the hosts, man and/or the environment.

Restricted use pesticide means a pesticide that is classified for restricted use under the provisions of section 3(d) of FIFRA and 40 CFR part 152, subpart I.

Restricted use pesticide retail dealer means any person who distributes or sells restricted use pesticides to any person, excluding transactions solely between persons who are pesticide producers, registrants, wholesalers, or retail sellers, acting only in those capacities.

Toxicity means the property of a pesticide that refers to the degree to which the pesticide, and its degradates and metabolites, are able to cause an adverse physiological effect on an organism.

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

(1) Pre-application activities involving mixing and loading the pesticide.

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

(3) Other pesticide-related activities, including, but not limited to, transporting or storing pesticide containers that have been opened, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other pesticide-containing materials.

Use-specific instructions means the information and requirements specific to a particular pesticide product or work site that an applicator needs in order to use the pesticide in accordance with applicable requirements and without causing unreasonable adverse effects.

§ 171.4 [Removed]

■ 6. Remove § 171.4.

■ 7. Revise § 171.5 to read as follows:

§ 171.5 Effective date.

(a) This part is effective March 6, 2017. Certification plans approved by EPA before the effective date remain approved except as provided in §§ 171.5(b)–(d) and 171.309.

(b) *Status of certification plans approved before effective date.* A certification plan approved by EPA before March 6, 2017 remains approved until March 4, 2020, except as provided in paragraph (c) of this section and § 171.309.

(c) *Extension of an existing plan during EPA review of proposed revisions.* If by March 4, 2020, a certifying authority has submitted to EPA a proposed modification of its certification plan pursuant to subpart D of this part, its certification plan approved by EPA before March 6, 2017 will remain in effect until EPA has approved or rejected the modified plan pursuant to § 171.309(a)(4) or March 4, 2022, whichever is earlier, except as provided in paragraph (d) of this section and § 171.309(b).

(d) *Extension of an existing plan after EPA has approved a revised plan.* Where EPA has approved a certifying authority's modified certification plan pursuant to § 171.309(a)(4), the certification plan approved by EPA before March 6, 2017 shall remain in effect as specified in EPA's approval of the modified certification plan.

(e) States, Tribes, or Federal agencies that do not have an EPA-approved certification plan in effect may submit to EPA for review and approval a certification plan that meets or exceeds all of the applicable requirements of this part any time.

§§ 171.6, 171.7, 171.8, 171.9,171.10,171.11 [Removed]

■ 8. Remove §§ 171.6, 171.7, 171.8, 171.9, 171.10, 171.11.

■ 9. Subpart B is added to part 171 to read as follows:

Subpart B—Certification Requirements for Applicators of Restricted Use Pesticides

Sec.
171.101 Commercial applicator certification categories.
171.103 Standards for certification of commercial applicators.
171.105 Standards for certification of private applicators.
171.107 Standards for recertification of certified applicators.

§ 171.101 Commercial applicator certification categories.

Certification categories. Categories of commercial applicators using or supervising the use of restricted use pesticides are identified below.

(a) *Agricultural pest control.*

(1) *Crop pest control.* This category applies to commercial applicators who

use or supervise the use of restricted use pesticides in production of agricultural commodities, including but not limited to grains, vegetables, small fruits, tree fruits, peanuts, tree nuts, tobacco, cotton, feed and forage crops including grasslands, and non-crop agricultural lands.

(2) *Livestock pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides on animals or to places on or in which animals are confined. Certification in this category alone is not sufficient to authorize the purchase, use, or supervision of use of products for predator control listed in paragraphs (k) and (l) of this section.

(b) *Forest pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides in forests, forest nurseries and forest seed production.

(c) *Ornamental and turf pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides to control pests in the maintenance and production of ornamental plants and turf.

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

(e) *Aquatic pest control.* This category applies to commercial applicators who use or supervise the use of any restricted use pesticide purposefully applied to standing or running water, excluding applicators engaged in public health related activities included in as specified in paragraph (h) of this section.

(f) *Right-of-way pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides in the maintenance of roadsides, powerlines, pipelines, and railway rights-of-way, and similar areas.

(g) *Industrial, institutional, and structural pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides in, on, or around the following: Food handling establishments, packing houses, and food-processing facilities; human dwellings; institutions, such as schools, hospitals and prisons; and industrial establishments, including manufacturing facilities, warehouses, grain elevators, and any other structures and adjacent areas, public or private, for the protection of stored, processed, or manufactured products.

(h) *Public health pest control.* This category applies to State, Tribal, Federal or other governmental employees and contractors who use or supervise the use of restricted use pesticides in government-sponsored public health programs for the management and control of pests having medical and public health importance.

(i) *Regulatory pest control.* This category applies to State, Tribal, Federal, or other local governmental employees and contractors who use or supervise the use of restricted use pesticides in government-sponsored programs for the control of regulated pests. Certification in this category does not authorize the purchase, use, or supervision of use of products for predator control listed in paragraphs (k) and (l) of this section.

(j) *Demonstration and research.* This category applies to individuals who demonstrate to the public the proper use and techniques of application of restricted use pesticides or supervise such demonstration and to persons conducting field research with restricted use pesticides, and in doing so, use or supervise the use of restricted use pesticides. This includes such individuals as extension specialists and county agents, commercial representatives demonstrating restricted use pesticide products, individuals demonstrating application or pest control methods used in public or private programs, and State, Federal, commercial, and other persons conducting field research on or involving restricted use pesticides.

(k) *Sodium cyanide predator control.* This pest control category applies to commercial applicators who use or supervise the use of sodium cyanide in a mechanical ejection device to control regulated predators.

(l) *Sodium fluoroacetate predator control.* This pest control category applies to commercial applicators who use or supervise the use of sodium fluoroacetate in a protective collar to control regulated predators.

(m) *Soil fumigation.* This category applies to commercial applicators who use or supervise the use of a restricted use pesticide to fumigate soil.

(n) *Non-soil fumigation.* This category applies to commercial applicators who use or supervise the use of a restricted use pesticide to fumigate anything other than soil.

(o) *Aerial pest control.* This category applies to commercial applicators who use or supervise the use of restricted use pesticides applied by fixed or rotary wing aircraft.

§ 171.103 Standards for certification of commercial applicators.

(a) *Determination of competency.* To be determined to have the necessary competency in the use and handling of restricted use pesticides by a State, Tribe, or Federal agency, a commercial applicator must receive a passing score on a written examination that meets the standards specified in paragraph (a)(2) of this section and any related performance testing that is required by the State, Tribe, or Federal agency. Examinations and any alternate methods employed by the certifying authority to determine applicator competency must include the core standards applicable to all categories (paragraph (c) of this section) and the standards applicable to each category in which an applicator seeks certification (paragraph (d) of this section). Certification processes must meet all of the following criteria:

(1) *Commercial applicator minimum age.* A commercial applicator must be at least 18 years old.

(2) *Examination standards.* The certifying authority must ensure that examinations conform to all of the following standards:

(i) The examination must be presented and answered in writing.

(ii) The examination must be proctored by an individual designated by the certifying authority and who is not seeking certification at any examination session that he or she is proctoring.

(iii) Each person seeking certification must present at the time of examination valid, government-issued photo identification or other form of similarly reliable identification authorized by the certifying authority as proof of identity and age to be eligible for certification.

(iv) Candidates must be monitored throughout the examination period.

(v) Candidates must be instructed in examination procedures before beginning the examination.

(vi) Examinations must be kept secure before, during, and after the examination period so that only the candidates have access to the examination, and candidates have access only in the presence of the proctor.

(vii) Candidates must not have verbal or non-verbal communication with anyone other than the proctor during the examination period.

(viii) No portion of the examination or any associated reference materials described in paragraph (a)(2)(ix) of this section may be copied or retained by any person other than a person authorized by the certifying authority to copy or retain the examination or any

associated reference materials described in paragraph (a)(2)(ix) of this section.

(ix) The only reference materials used during the examination are those that are approved by the certifying authority and provided and collected by the proctor.

(x) Reference materials provided to examinees are reviewed after the examination is complete to ensure that no portion of the reference material has been removed, altered, or destroyed.

(xi) The proctor reports to the certifying authority any examination administration inconsistencies or irregularities, including but not limited to cheating, use of unauthorized materials, and attempts to copy or retain the examination.

(xii) The examination must be conducted in accordance with any other requirements of the certifying authority related to examination administration.

(xiii) The certifying authority must notify each candidate of the results of his or her examination.

(b) *Additional methods of determining competency.* In addition to written examination requirements for determining competency, a certifying authority may employ additional methods for determining applicator competency, such as performance testing. Any such additional methods must be specified in the certifying authority's Agency-approved certification plan and must comply with the applicable standards in paragraph (a) of this section.

(c) *Core standards for all categories of certified commercial applicators.* Persons seeking certification as commercial applicators must demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides by passing a written examination. Written examinations for all commercial applicators must address all of the following areas of competency:

(1) *Label and labeling comprehension.* Familiarity with pesticide labels and labeling and their functions, including all of the following:

(i) The general format and terminology of pesticide labels and labeling.

(ii) Understanding instructions, warnings, terms, symbols, and other information commonly appearing on pesticide labels and labeling.

(iii) Understanding that it is a violation of Federal law to use any registered pesticide in a manner inconsistent with its labeling.

(iv) Understanding labeling requirements that a certified applicator must be physically present at the site of the application.

(v) Understanding labeling requirements for supervising noncertified applicators working under the direct supervision of a certified applicator.

(vi) Understanding that applicators must comply with all use restrictions and directions for use contained in pesticide labels and labeling, including being certified in the certification category appropriate to the type and site of the application.

(vii) Understanding the meaning of product classification as either general or restricted use and that a product may be unclassified.

(viii) Understanding and complying with product-specific notification requirements.

(ix) Recognizing and understanding the difference between mandatory and advisory labeling language.

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

(i) Understanding the different natures of the risks of acute toxicity and chronic toxicity, as well as the long-term effects of pesticides.

(ii) Understanding that a pesticide's risk is a function of exposure and the pesticide's toxicity.

(iii) Recognition of likely ways in which dermal, inhalation, and oral exposure may occur.

(iv) Common types and causes of pesticide mishaps.

(v) Precautions to prevent injury to applicators and other individuals in or near treated areas.

(vi) Need for, and proper use of, protective clothing and personal protective equipment.

(vii) Symptoms of pesticide poisoning.

(viii) First aid and other procedures to be followed in case of a pesticide mishap.

(ix) Proper identification, storage, transport, handling, mixing procedures, and disposal methods for pesticides and used pesticide containers, including precautions to be taken to prevent children from having access to pesticides and pesticide containers.

(3) *Environment.* The potential environmental consequences of the use and misuse of pesticides, including the influence of all of the following:

(i) Weather and other indoor and outdoor climatic conditions.

(ii) Types of terrain, soil, or other substrate.

(iii) Presence of fish, wildlife, and other non-target organisms.

(iv) Drainage patterns.

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

(i) The importance of correctly identifying target pests and selecting the proper pesticide product(s) for effective pest control.

(ii) Verifying that the labeling does not prohibit the use of the product to control the target pest(s).

(5) *Pesticides.* Characteristics of pesticides, including all of the following:

(i) Types of pesticides.

(ii) Types of formulations.

(iii) Compatibility, synergism, persistence, and animal and plant toxicity of the formulations.

(iv) Hazards and residues associated with use.

(v) Factors that influence effectiveness or lead to problems such as pesticide resistance.

(vi) Dilution procedures.

(6) *Equipment.* Application equipment, including all of the following:

(i) Types of equipment and advantages and limitations of each type.

(ii) Use, maintenance, and calibration procedures.

(7) *Application methods.* Selecting appropriate application methods, including all of the following:

(i) Methods used to apply various forms and formulations of pesticides.

(ii) Knowledge of which application method to use in a given situation and that use of a fumigant, aerial application, sodium cyanide, or sodium fluoroacetate requires additional certification.

(iii) How selection of application method and use of a pesticide may result in proper use, unnecessary or ineffective use, and misuse.

(iv) Prevention of drift and pesticide loss into the environment.

(8) *Laws and regulations.* Knowledge of all applicable State, Tribal, and Federal laws and regulations.

(9) *Responsibilities of supervisors of noncertified applicators.* Knowledge of the responsibilities of certified applicators supervising noncertified applicators, including all of the following:

(i) Understanding and complying with requirements in § 171.201 of this part for certified commercial applicators who supervise noncertified applicators using restricted use pesticides.

(ii) The recordkeeping requirements of pesticide safety training for noncertified applicators who use restricted use pesticides under the direct supervision of a certified applicator.

(iii) Providing use-specific instructions to noncertified applicators

using restricted use pesticides under the direct supervision of a certified applicator.

(iv) Explaining pertinent State, Tribal, and Federal laws and regulations to noncertified applicators who use restricted use pesticides under the direct supervision of a certified applicator.

(10) *Professionalism.* Understanding the importance of all of the following:

(i) Maintaining chemical security for restricted use pesticides.

(ii) How to communicate information about pesticide exposures and risks with customers and the public.

(iii) Appropriate product stewardship for certified applicators.

(d) *Specific standards of competency for each category of commercial applicators.* In addition to satisfying the requirements of paragraph (c) of this section, to be certified as commercial applicators, persons must demonstrate through written examinations practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides for each category for which they intend to apply restricted use pesticides, except as provided at §§ 171.303(a)(4) and 171.305(a)(5). The minimum competency standards for each category are listed in paragraphs (d)(1) through (15) of this section. Examinations for each category of certification listed in § 171.101 must be based on the standards of competency specified in paragraphs (d)(1) through (15) of this section and examples of problems and situations appropriate to the particular category in which the applicator is seeking certification.

(1) *Agricultural pest control.*

(i) *Crop pest control.* Applicators must demonstrate practical knowledge of crops, grasslands, and non-crop agricultural lands and the specific pests of those areas on which they may be using restricted use pesticides. The importance of such competency is amplified by the extensive areas involved, the quantities of pesticides needed, and the ultimate use of many commodities as food and feed. The required knowledge includes pre-harvest intervals, restricted entry intervals, phytotoxicity, potential for environmental contamination such as soil and water problems, non-target injury, and other problems resulting from the use of restricted use pesticides in agricultural areas. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures.

(ii) *Livestock pest control.* Applicators must demonstrate practical knowledge of such animals and their associated pests. The required knowledge includes specific pesticide toxicity and residue potential, and the hazards associated with such factors as formulation, application techniques, age of animals, stress, and extent of treatment.

(2) *Forest pest control.* Applicators must demonstrate practical knowledge of types of forests, forest nurseries, and seed production within the jurisdiction of the certifying authority and the pests involved. The required knowledge includes the cyclic occurrence of certain pests and specific population dynamics as a basis for programming pesticide applications, the relevant organisms causing harm and their vulnerability to the pesticides to be applied, how to determine when pesticide use is proper, selection of application method and proper use of application equipment to minimize non-target exposures, and appropriate responses to meteorological factors and adjacent land use. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures.

(3) *Ornamental and turf pest control.* Applicators must demonstrate practical knowledge of pesticide problems associated with the production and maintenance of ornamental plants and turf. The required knowledge includes the potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures. Because of the frequent proximity of human habitations to application activities, applicators in this category must demonstrate practical knowledge of application methods that will minimize or prevent hazards to humans, pets, and other domestic animals.

(4) *Seed treatment.* Applicators must demonstrate practical knowledge including recognizing types of seeds to be treated, the effects of carriers and surface active agents on pesticide binding and germination, the hazards associated with handling, sorting and mixing, and misuse of treated seed, the importance of proper application techniques to avoid harm to non-target organisms, and the proper disposal of unused treated seeds.

(5) *Aquatic pest control.* Applicators must demonstrate practical knowledge of the characteristics of various aquatic use situations, the potential for adverse effects on non-target plants, fish, birds, beneficial insects and other organisms in the immediate aquatic environment and downstream, and the principles of limited area application.

(6) *Right-of-way pest control.* Applicators must demonstrate practical knowledge of the types of environments (terrestrial and aquatic) traversed by rights-of-way, recognition of target pests, and techniques to minimize non-target exposure, runoff, drift, and excessive foliage destruction. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants and pests to be controlled, and for persistence beyond the intended period of pest control.

(7) *Industrial, institutional, and structural pest control.* Applicators must demonstrate a practical knowledge of industrial, institutional, and structural pests, including recognizing those pests and signs of their presence, their habitats, their life cycles, biology, and behavior as it may be relevant to problem identification and control. Applicators must demonstrate practical knowledge of types of formulations appropriate for control of industrial, institutional and structural pests, and methods of application that avoid contamination of food, minimize damage to and contamination of areas treated, minimize acute and chronic exposure of people and pets, and minimize environmental impacts of outdoor applications.

(8) *Public health pest control.* Applicators must demonstrate practical knowledge of pests that are important vectors of disease, including recognizing the pests and signs of their presence, their habitats, their life cycles, biology and behavior as it may be relevant to problem identification and control. The required knowledge also includes how to minimize damage to and contamination of areas treated, acute and chronic exposure of people and pets, and non-target exposures.

(9) *Regulatory pest control.* Applicators must demonstrate practical knowledge of regulated pests, applicable laws relating to quarantine and other regulation of regulated pests, and the potential impact on the environment of restricted use pesticides used in suppression and eradication programs. They must demonstrate knowledge of factors influencing introduction, spread, and population dynamics of regulated pests.

(10) *Demonstration and research.* Applicators must demonstrate practical knowledge of the potential problems, pests, and population levels reasonably expected to occur in a demonstration situation and the effects of restricted use pesticides on target and non-target organisms. In addition, they must

demonstrate competency in each pest control category applicable to their demonstrations.

(11) *Sodium cyanide predator control.* Applicators must demonstrate practical knowledge of mammalian predator pests, including recognizing those pests and signs of their presence, their habitats, their life cycles, biology, and behavior as it may be relevant to pest identification and control. Applicators must demonstrate comprehension of all laws and regulations applicable to the use of mechanical ejection devices for sodium cyanide, including the restrictions on the use of sodium cyanide products ordered by the EPA Administrator. . Applicators must also demonstrate practical knowledge and understanding of all of the specific use restrictions for sodium cyanide devices, including safe handling and proper placement of the capsules and device, proper use of the antidote kit, notification to medical personnel before use of the device, conditions of and restrictions on when and where devices can be used, requirements to consult U.S. Fish and Wildlife Service maps before use to avoid affecting endangered species, maximum density of devices, provisions for supervising and monitoring applicators, required information exchange in locations where more than one agency is authorized to place devices, and specific requirements for recordkeeping, monitoring, field posting, proper storage, and disposal of damaged or used sodium cyanide capsules.

(12) *Sodium fluoroacetate predator control.* Applicators must demonstrate practical knowledge of mammalian predator pests, including recognizing those pests and signs of their presence, their habitats, their life cycles, biology, and behavior as it may be relevant to pest identification and control. Applicators must demonstrate comprehension of all laws and regulations applicable to the use of sodium fluoroacetate products, including the restrictions on the use of sodium fluoroacetate products ordered by the EPA Administrator. Applicators must also demonstrate practical knowledge and understanding of the specific use restrictions for sodium fluoroacetate in the livestock protection collar, including where and when sodium fluoroacetate products can be used, safe handling and placement of collars, and practical treatment of sodium fluoroacetate poisoning in humans and domestic animals. Applicators must also demonstrate practical knowledge and understanding of specific requirements for field posting, monitoring, recordkeeping, proper storage of collars, disposal of punctured or leaking collars, disposal of contaminated animal remains, vegetation, soil, and clothing, and reporting of suspected and actual poisoning, mishap, or injury to threatened or endangered species, humans, domestic animals, or non-target wild animals.

(13) *Soil fumigation.* Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing soil fumigation applications, including all the following:

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

(A) Labeling requirements specific to soil fumigants.

(B) Requirements for certified applicators of fumigants, fumigant handlers and permitted fumigant handler activities, and the safety information that certified applicators must provide to noncertified applicators using fumigants under their direct supervision.

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

(D) Recordkeeping requirements.

(E) Labeling provisions unique to fumigant products containing certain active ingredients.

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

(A) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, field workers, and bystanders can become exposed to fumigants.

(B) Common problems and mistakes that can result in direct exposure to fumigants.

(C) Signs and symptoms of human exposure to fumigants.

(D) Air concentrations of a fumigant that require that applicators wear respirators or exit the work area entirely.

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

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

(G) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

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

(I) Labeling requirements for transportation, storage, spill clean up, and emergency response for soil fumigants, including safe disposal of containers and contaminated soil, and management of empty containers.

(iii) *Soil fumigant chemical characteristics.* Characteristics of soil fumigants, including all of the following:

(A) Chemical characteristics of soil fumigants.

(B) Specific human exposure concerns for soil fumigants.

(C) How soil fumigants change from a liquid or solid to a gas.

(D) How soil fumigants disperse in the application zone.

(E) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(iv) *Application.* Selecting appropriate application methods and timing, including all of the following:

(A) Application methods, including but not limited to water-run and non-water- run applications, and equipment commonly used for each soil fumigant.

(B) Site characteristics that influence fumigant exposure.

(C) Understanding temperature inversions and their impact on soil fumigant application.

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

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

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

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

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

(I) Understanding the basic techniques for calibrating soil fumigant application equipment.

(v) *Soil and pest factors.* Soil and pest factors that influence fumigant activity, including all of the following:

(A) Influence of soil factors on fumigant volatility and movement within the soil profile.

(B) Factors that influence gaseous movement through the soil profile and into the air.

(C) Soil characteristics, including how soil characteristics affect the success of a soil fumigant application, assessing soil moisture, and correcting for soil characteristics that could hinder a successful soil fumigant application.

(D) Identifying pests causing the damage and verifying they can be controlled with soil fumigation.

(E) Understanding the relationship between pest density and application rate.

(F) The importance of proper application depth and timing.

(vi) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(A) Following labeling directions for required personal protective equipment.

(B) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(C) Understanding the types of respirators required when using specific soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

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

(vii) *Fumigant management plans and post-application summaries.* Information about fumigant management plans, including all of the following:

(A) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.

(B) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(C) The person responsible for verifying that a fumigant management plan is accurate.

(D) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(viii) *Buffer zones and posting requirements.* Understanding buffer zones and posting requirements, including all of the following:

(A) Buffer zones and the buffer zone period.

(B) Identifying who is allowed in a buffer zone during the buffer zone period and who is prohibited from being in a buffer zone during the buffer zone period.

(C) Using the buffer zone table from the labeling to determine the size of the buffer zone.

(D) Factors that determine the buffer zone credits for application scenarios and calculating buffer zones using credits.

(E) Distinguishing buffer zone posting and treated area posting, including the pre-application and post-application posting timeframes for each.

(F) Proper choice and placement of warning signs.

(14) *Non-soil fumigation.* Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing fumigation applications of restricted use pesticides to sites other than soil, including all the following:

(i) *Label & labeling comprehension.* Familiarity with the pesticide labels and labeling for products used to perform non-soil fumigation, including labeling requirements specific to non-soil fumigants.

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

(A) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, and bystanders can become exposed to fumigants.

(B) Common problems and mistakes that can result in direct exposure to fumigants.

(C) Signs and symptoms of human exposure to fumigants.

(D) Air concentrations of a fumigant that require applicators to wear respirators or to exit the work area entirely.

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

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

(G) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

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

(I) Labeling requirements for transportation, storage, spill clean up, and emergency response for non-soil fumigants, including safe disposal of containers and contaminated materials, and management of empty containers.

(iii) *Non-soil fumigant chemical characteristics.* Characteristics of non-soil fumigants, including all of the following:

(A) Chemical characteristics of non-soil fumigants.

(B) Specific human exposure concerns for non-soil fumigants.

(C) How fumigants change from a liquid or solid to a gas.

(D) How fumigants disperse in the application zone.

(E) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(iv) *Application.* Selecting appropriate application methods and timing, including all of the following:

(A) Application methods and equipment commonly used for non-soil fumigation.

(B) Site characteristics that influence fumigant exposure.

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

(D) Conducting pre-application inspection of application equipment and the site to be fumigated.

(E) Understanding the purpose and methods of sealing the area to be fumigated, including the factors that determine which sealing method to use.

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

(G) Understanding the basic techniques for calibrating non-soil fumigant application equipment.

(H) Understanding when and how to conduct air monitoring and when it is required.

(v) *Pest factors.* Pest factors that influence fumigant activity, including all of the following:

(A) Influence of pest factors on fumigant volatility.

(B) Factors that influence gaseous movement through the area being fumigated and into the air.

(C) Identifying pests causing the damage and verifying they can be controlled with fumigation.

(D) Understanding the relationship between pest density and application rate.

(E) The importance of proper application rate and timing.

(vi) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(A) Following labeling directions for required personal protective equipment.

(B) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(C) Understanding the types of respirators required when using specific non-soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

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

(vii) *Fumigant management plans and post-application summaries.* Information about fumigant management plans and when they are required, including all of the following:

(A) When a fumigant management plan must be in effect, how long it must

be kept on file, where it must be kept during the application, and who must have access to it.

(B) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(C) The person responsible for verifying that a fumigant management plan is accurate.

(D) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(viii) *Posting requirements.* Understanding posting requirements, including all of the following:

(A) Understanding who is allowed in an area being fumigated or after fumigation and who is prohibited from being in such areas.

(B) Distinguishing fumigant labeling-required posting and treated area posting, including the pre-application and post-application posting timeframes for each.

(C) Proper choice and placement of warning signs.

(15) *Aerial pest control.* Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing aerial application of restricted use pesticides, including all the following:

(i) *Labeling.* Labeling requirements and restrictions specific to aerial application of pesticides including:

(A) Spray volumes.

(B) Buffers and no-spray zones.

(C) Weather conditions specific to wind and inversions.

(ii) *Application equipment.* Understand how to choose and maintain aerial application equipment, including all of the following:

(A) The importance of inspecting application equipment to ensure it is in proper operating condition prior to beginning an application.

(B) Selecting proper nozzles to ensure appropriate pesticide dispersal and to minimize drift.

(C) Knowledge of the components of an aerial pesticide application system, including pesticide hoppers, tanks, pumps, and types of nozzles.

(D) Interpreting a nozzle flow rate chart.

(E) Determining the number of nozzles for intended pesticide output using nozzle flow rate chart, aircraft speed, and swath width.

(F) How to ensure nozzles are placed to compensate for uneven dispersal due to uneven airflow from wingtip vortices, helicopter rotor turbulence, and aircraft propeller turbulence.

(G) Where to place nozzles to produce the appropriate droplet size.

(H) How to maintain the application system in good repair, including pressure gauge accuracy, filter cleaning according to schedule, and checking nozzles for excessive wear.

(I) How to calculate required and actual flow rates.

(J) How to verify flow rate using fixed timing, open timing, known distance, or a flow meter.

(K) When to adjust and calibrate application equipment.

(iii) *Application considerations.* The applicator must demonstrate knowledge of factors to consider before and during application, including all of the following:

(A) Weather conditions that could impact application by affecting aircraft engine power, take-off distance, and climb rate, or by promoting spray droplet evaporation.

(B) How to determine wind velocity, direction, and air density at the application site.

(C) The potential impact of thermals and temperature inversions on aerial pesticide application.

(iv) *Minimizing drift.* The applicator must demonstrate knowledge of methods to minimize off-target pesticide movement, including all of the following:

(A) How to determine drift potential of a product using a smoke generator.

(B) How to evaluate vertical and horizontal smoke plumes to assess wind direction, speed, and concentration.

(C) Selecting techniques that minimize pesticide movement out of the area to be treated.

(D) Documenting special equipment configurations or flight patterns used to reduce off-target pesticide drift.

(v) *Performing aerial application.* The applicator must demonstrate competency in performing an aerial pesticide application, including all of the following:

(A) Selecting a flight altitude that minimizes streaking and off-target pesticide drift.

(B) Choosing a flight pattern that ensures applicator and bystander safety and proper application.

(C) The importance of engaging and disengaging spray precisely when entering and exiting a predetermined swath pattern.

(D) Tools available to mark swaths, such as global positioning systems and flags.

(E) Recordkeeping requirements for aerial pesticide applications including application conditions if applicable.

(e) *Exceptions.* The requirements in § 171.103(a)–(d) of this part do not apply to the following persons:

(1) Persons conducting laboratory research involving restricted use pesticides.

(2) Doctors of Medicine and Doctors of Veterinary Medicine applying restricted use pesticides to patients during the course of the ordinary practice of those professions.

171.105 Standards for certification of private applicators.

(a) *General private applicator certification.* Before using or supervising the use of a restricted use pesticide as a private applicator, a person must be certified by an appropriate certifying authority as having the necessary competency to use restricted use pesticides for pest control in the production of agricultural commodities, which includes the ability to read and understand pesticide labeling. Certification in this general private applicator certification category alone is not sufficient to authorize the purchase, use, or supervision of use of the restricted use pesticide products in the categories listed in paragraphs (b) through (f) of this section. Persons seeking certification as private applicators must demonstrate practical knowledge of the principles and practices of pest control associated with the production of agricultural commodities and effective use of restricted use pesticides, including all of the following:

(1) *Label and labeling comprehension.* Familiarity with pesticide labels and labeling and their functions, including all of the following:

(i) The general format and terminology of pesticide labels and labeling.

(ii) Understanding instructions, warnings, terms, symbols, and other information commonly appearing on pesticide labels and labeling.

(iii) Understanding that it is a violation of Federal law to use any registered pesticide in a manner inconsistent with its labeling.

(iv) Understanding when a certified applicator must be physically present at the site of the application based on labeling requirements.

(v) Understanding labeling requirements for supervising noncertified applicators working under the direct supervision of a certified applicator.

(vi) Understanding that applicators must comply with all use restrictions and directions for use contained in pesticide labels and labeling, including being certified in the appropriate category to use restricted use pesticides for fumigation or aerial application, or predator control devices containing

sodium cyanide or sodium fluoroacetate, if applicable.

(vii) Understanding the meaning of product classification as either general or restricted use, and that a product may be unclassified.

(viii) Understanding and complying with product-specific notification requirements.

(ix) Recognizing and understanding the difference between mandatory and advisory labeling language.

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

(i) Understanding the different natures of the risks of acute toxicity and chronic toxicity, as well as the long-term effects of pesticides.

(ii) Understanding that a pesticide's risk is a function of exposure and the pesticide's toxicity.

(iii) Recognition of likely ways in which dermal, inhalation, and oral exposure may occur.

(iv) Common types and causes of pesticide mishaps.

(v) Precautions to prevent injury to applicators and other individuals in or near treated areas.

(vi) Need for, and proper use of, protective clothing and personal protective equipment.

(vii) Symptoms of pesticide poisoning.

(viii) First aid and other procedures to be followed in case of a pesticide mishap.

(ix) Proper identification, storage, transport, handling, mixing procedures, and disposal methods for pesticides and used pesticide containers, including precautions to be taken to prevent children from having access to pesticides and pesticide containers.

(3) *Environment.* The potential environmental consequences of the use and misuse of pesticides, including the influence of the following:

(i) Weather and other climatic conditions.

(ii) Types of terrain, soil, or other substrate.

(iii) Presence of fish, wildlife, and other non-target organisms.

(iv) Drainage patterns.

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

(i) The importance of correctly identifying target pests and selecting the proper pesticide product(s).

(ii) Verifying that the labeling does not prohibit the use of the product to control the target pest(s).

(5) *Pesticides.* Characteristics of pesticides, including all of the following:

(i) Types of pesticides.

(ii) Types of formulations.

(iii) Compatibility, synergism, persistence, and animal and plant toxicity of the formulations.

(iv) Hazards and residues associated with use.

(v) Factors that influence effectiveness or lead to problems such as pesticide resistance.

(vi) Dilution procedures.

(6) *Equipment.* Application equipment, including all of the following:

(i) Types of equipment and advantages and limitations of each type.

(ii) Uses, maintenance, and calibration procedures.

(7) *Application methods.* Selecting appropriate application methods, including all of the following:

(i) Methods used to apply various forms and formulations of pesticides.

(ii) Knowledge of which application method to use in a given situation and that use of a fumigant, aerial application, or predator control device containing sodium cyanide or sodium fluoroacetate requires additional certification.

(iii) How selection of application method and use of a pesticide may result in proper use, unnecessary or ineffective use, and misuse.

(iv) Prevention of drift and pesticide loss into the environment.

(8) *Laws and regulations.* Knowledge of all applicable State, Tribal, and Federal laws and regulations, including understanding the Worker Protection Standard in 40 CFR part 170 and the circumstances where compliance is required.

(9) *Responsibilities for supervisors of noncertified applicators.* Certified applicator responsibilities related to supervision of noncertified applicators, including all of the following:

(i) Understanding and complying with requirements in § 171.201 of this part for private applicators who supervise noncertified applicators using restricted use pesticides.

(ii) Providing use-specific instructions to noncertified applicators using restricted use pesticides under the direct supervision of a certified applicator.

(iii) Explaining appropriate State, Tribal, and Federal laws and regulations to noncertified applicators working under the direct supervision of a certified applicator.

(10) *Stewardship.* Understanding the importance of all of the following:

(i) Maintaining chemical security for restricted use pesticides.

(ii) How to communicate information about pesticide exposures and risks with agricultural workers and handlers and other persons.

(11) *Agricultural pest control.* Practical knowledge of pest control applications to agricultural commodities including all of the following:

(i) Specific pests of relevant agricultural commodities.

(ii) How to avoid contamination of ground and surface waters.

(iii) Understanding pre-harvest and restricted entry intervals and entry-restricted periods and areas.

(iv) Understanding specific pesticide toxicity and residue potential when pesticides are applied to animal or animal product agricultural commodities.

(v) Relative hazards associated with using pesticides on animals or places in which animals are confined based on formulation, application technique, age of animal, stress, and extent of treatment.

(b) *Sodium cyanide predator control.* In addition to satisfying the requirements in paragraph (a) of this section, in order to use sodium cyanide in a mechanical ejection device, private applicators must demonstrate comprehension of all laws and regulations applicable to the use of mechanical ejection devices for sodium cyanide, including the restrictions on the use of sodium cyanide products ordered by the EPA Administrator. Applicators must also demonstrate practical knowledge and understanding of all of the specific use restrictions for sodium cyanide devices, including safe handling and proper placement of the capsules and device, proper use of the antidote kit, notification to medical personnel before use of the device, conditions of and restrictions on where devices can be used, requirements to consult U.S. Fish and Wildlife Service maps before use to avoid affecting endangered species, maximum density of devices, provisions for supervising and monitoring applicators, required information exchange in locations where more than one agency is authorized to place devices, and specific requirements for recordkeeping, monitoring, field posting, proper storage, and disposal of damaged or used sodium cyanide capsules.

(c) *Sodium fluoroacetate predator control.* In addition to satisfying the requirements in paragraph (a) of this section, in order to use sodium fluoroacetate, private applicators must demonstrate comprehension of all laws and regulations applicable to the use of sodium fluoroacetate products, including the restrictions on the use of sodium fluoroacetate products ordered by the EPA Administrator. Applicators must also demonstrate practical knowledge and understanding of the

specific use restrictions for sodium fluoroacetate in the livestock protection collar, including where and when sodium fluoroacetate products can be used, safe handling and placement of collars, and practical treatment of sodium fluoroacetate poisoning in humans and domestic animals. Applicators must also demonstrate practical knowledge and understanding of specific requirements for field posting, monitoring, recordkeeping, proper storage of collars, disposal of punctured or leaking collars, disposal of contaminated animal remains, vegetation, soil, and clothing, and reporting of suspected and actual poisoning, mishap, or injury to threatened or endangered species, humans, domestic animals, or non-target wild animals.

(d) *Soil fumigation.* In addition to satisfying the requirements in paragraph (a) of this section, private applicators that use or supervise the use of a restricted use pesticide to fumigate soil must demonstrate practical knowledge of the pest problems and pest control practices associated with performing soil fumigant applications, including all the following:

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

(i) Labeling requirements specific to soil fumigants.

(ii) Requirements for certified applicators of fumigants, fumigant handlers and permitted fumigant handler activities, and the safety information that certified applicators must provide to noncertified applicators using fumigants under the direct supervision of certified applicators.

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

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

(v) Labeling provisions unique to products containing certain active ingredients.

(vi) Labeling requirements for fumigant management plans, such as when a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it; the elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan; the person responsible for verifying that a fumigant management plan is accurate; and the elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

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

(i) Understanding how certified applicators, noncertified applicators using fumigants under the direct supervision of certified applicators, field workers, and bystanders can become exposed to fumigants.

(ii) Common problems and mistakes that can result in direct exposure to fumigants.

(iii) Signs and symptoms of human exposure to fumigants.

(iv) Air concentrations of a fumigant that require applicators to wear respirators or to exit the work area entirely.

(v) Steps to take if a fumigant applicator experiences sensory irritation.

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

(vii) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

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

(ix) Labeling requirements for transportation, storage, spill cleanup, and emergency response for soil fumigants, including safe disposal of containers and contaminated soil, and management of empty containers.

(3) *Soil fumigant chemical characteristics.* Characteristics of soil fumigants, including all of the following:

(i) Chemical characteristics of soil fumigants.

(ii) Specific human exposure concerns for soil fumigants.

(iii) How soil fumigants change from a liquid or solid to a gas.

(iv) How soil fumigants disperse in the application zone.

(v) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(4) *Application.* Selecting appropriate application methods and timing, including all of the following:

(i) Application methods, including but not limited to water-run and non-water-run applications, and equipment commonly used for each soil fumigant.

(ii) Site characteristics that influence fumigant exposure.

(iii) Understanding temperature inversions and their impact on soil fumigant application.

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

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

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

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

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

(ix) Understanding the basic techniques for calibrating soil fumigant application equipment.

(5) *Soil and pest factors.* Soil and pest factors that influence fumigant activity, including all of the following:

(i) Influence of soil factors on fumigant volatility and movement within the soil profile.

(ii) Factors that influence gaseous movement through the soil profile and into the air.

(iii) Soil characteristics, including how soil characteristics affect the success of a soil fumigant application, assessing soil moisture, and correcting for soil characteristics that could hinder a successful soil fumigant application.

(iv) Identifying pests causing the damage and verifying they can be controlled with soil fumigation.

(v) Understanding the relationship between pest density and application rate.

(vi) The importance of proper application depth and timing.

(6) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(i) Following labeling directions for required personal protective equipment.

(ii) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(iii) Understanding the types of respirators required when using specific soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

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

(7) *Fumigant management plans and post-application summaries.* Information about fumigant management plans, including all of the following:

(i) When a fumigant management plan must be in effect, how long it must be

kept on file, where it must be kept during the application, and who must have access to it.

(ii) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(iii) The person responsible for verifying that a fumigant management plan is accurate.

(iv) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(8) *Buffer zones and posting requirements.* Understanding buffer zones and posting requirements, including all of the following:

(i) Buffer zones and the buffer zone period.

(ii) Identifying who may be in a buffer zone during the buffer zone period and who is prohibited from being in a buffer zone during the buffer zone period.

(iii) Using the buffer zone table from the labeling to determine the size of the buffer zone.

(iv) Factors that determine the buffer zone credits for application scenarios and calculating buffer zones using credits.

(v) Distinguishing buffer zone posting and treated area posting, including the pre-application and post-application posting timeframes for each.

(vi) Proper choice and placement of warning signs.

(e) *Non-soil fumigation.* In addition to satisfying the requirements in paragraph (a) of this section, private applicators that use or supervise the use of a restricted use pesticide to fumigate anything other than soil must demonstrate practical knowledge of the pest problems and pest control practices associated with performing fumigation applications to sites other than soil, including all the following:

(1) *Label and labeling comprehension.* Familiarity with the pesticide labels and labeling for products used to perform non-soil fumigation, including labeling requirements specific to non-soil fumigants.

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

(i) Understanding how certified applicators, handlers, and bystanders can become exposed to fumigants.

(ii) Common problems and mistakes that can result in direct exposure to fumigants.

(iii) Signs and symptoms of human exposure to fumigants.

(iv) When air concentrations of a fumigant triggers handlers to wear respirators or to exit the work area entirely.

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

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

(vii) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

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

(ix) Labeling requirements for transportation, storage, spill clean up, and emergency response for non-soil fumigants, including safe disposal of containers and contaminated materials, and management of empty containers.

(3) *Non-soil fumigant chemical characteristics.* Characteristics of non-soil fumigants, including all of the following:

(i) Chemical characteristics of non-soil fumigants.

(ii) Specific human exposure concerns for non-soil fumigants.

(iii) How fumigants change from a liquid or solid to a gas.

(iv) How fumigants disperse in the application zone.

(v) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(4) *Application.* Selecting appropriate application methods and timing, including all of the following:

(i) Application methods and equipment commonly used for non-soil fumigation.

(ii) Site characteristics that influence fumigant exposure.

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

(iv) Conducting pre-application inspection of application equipment and the site to be fumigated.

(v) Understanding the purpose and methods of sealing the area to be fumigated, including the factors that determine which sealing method to use.

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

(vii) Understanding the basic techniques for calibrating non-soil fumigant application equipment.

(viii) Understanding when and how to conduct air monitoring and when it is required.

(5) *Pest factors.* Pest factors that influence fumigant activity, including all of the following:

(i) Influence of pest factors on fumigant volatility.

(ii) Factors that influence gaseous movement through the area being fumigated and into the air.

(iii) Identifying pests causing the damage and verifying they can be controlled with fumigation.

(iv) Understanding the relationship between pest density and application rate.

(v) The importance of proper application rate and timing.

(6) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(i) Following labeling directions for required personal protective equipment.

(ii) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(iii) Understanding the types of respirators required when using specific soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

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

(7) *Fumigant management plans and post-application summaries.* Information about fumigant management plans and when they are required, including all of the following:

(i) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.

(ii) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(iii) The person responsible for verifying that a fumigant management plan is accurate.

(iv) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(8) *Posting requirements.* Understanding posting requirements, including all of the following:

(i) Understanding who is allowed in an area being fumigated or after fumigation and who is prohibited from being in such areas.

(ii) Distinguishing fumigant labeling-required posting and treated area posting, including the pre-application and post-application posting timeframes for each.

(iii) Proper choice and placement of warning signs.

(f) *Aerial pest control.* In addition to satisfying the requirements in paragraph (a) of this section, private applicators that use or supervise the use of restricted use pesticides applied by fixed or rotary wing aircraft must

demonstrate practical knowledge of the pest problems and pest control practices associated with performing aerial application, including all the following:

(1) *Labeling.* Labeling requirements and restrictions specific to aerial application of pesticides including:

(i) Spray volumes.

(ii) Buffers and no-spray zones.

(iii) Weather conditions specific to wind and inversions.

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

(2) *Application equipment.* Understand how to choose and maintain aerial application equipment, including all of the following:

(i) The importance of inspecting application equipment to ensure it is in proper operating condition prior to beginning an application.

(ii) Selecting proper nozzles to ensure appropriate pesticide dispersal and to minimize drift.

(iii) Knowledge of the components of an aerial pesticide application system, including pesticide hoppers, tanks, pumps, and types of nozzles.

(iv) Interpreting a nozzle flow rate chart.

(v) Determining the number of nozzles for intended pesticide output using nozzle flow rate chart, aircraft speed, and swath width.

(vi) How to ensure nozzles are placed to compensate for uneven dispersal due to uneven airflow from wingtip vortices, helicopter rotor turbulence, and aircraft propeller turbulence.

(vii) Where to place nozzles to produce the appropriate droplet size.

(viii) How to maintain the application system in good repair, including pressure gauge accuracy, filter cleaning according to schedule, and checking nozzles for excessive wear.

(ix) How to calculate required and actual flow rates.

(x) How to verify flow rate using fixed timing, open timing, known distance, or a flow meter.

(xi) When to adjust and calibrate application equipment.

(3) *Application considerations.* The applicator must demonstrate knowledge of factors to consider before and during application, including all of the following:

(i) Weather conditions that could impact application by affecting aircraft engine power, take-off distance, and climb rate, or by promoting spray droplet evaporation.

(ii) How to determine wind velocity, direction, and air density at the application site.

(iii) The potential impact of thermals and temperature inversions on aerial pesticide application.

(4) *Minimizing drift.* The applicator must demonstrate knowledge of methods to minimize off-target pesticide movement, including all of the following:

(i) How to determine drift potential of a product using a smoke generator.

(ii) How to evaluate vertical and horizontal smoke plumes to assess wind direction, speed, and concentration.

(iii) Selecting techniques that minimize pesticide movement out of the area to be treated.

(iv) Documenting special equipment configurations or flight patterns used to reduce off-target pesticide drift.

(5) *Performing aerial application.* The applicator must demonstrate competency in performing an aerial pesticide application, including all of the following:

(i) Selecting a flight altitude that minimizes streaking and off-target pesticide drift.

(ii) Choosing a flight pattern that ensures applicator and bystander safety and proper application.

(iii) The importance of engaging and disengaging spray precisely when entering and exiting a predetermined swath pattern.

(iv) Tools available to mark swaths, such as global positioning systems and flags.

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

(h) *Private applicator competency.* The competency of each candidate for private applicator certification must be established by the certifying authority based upon the certification standards set forth in paragraphs (a) through (g) of this section in order to assure that private applicators have the competency to use and supervise the use of restricted use pesticides in accordance with applicable State, Tribal, and Federal laws and regulations. The certifying authority must use either a written examination process as described in paragraph (h)(1) of this section or a non-examination training process as described in paragraph (h)(2) of this section to assure the competency of private applicators in regard to the general certification standards applicable to all private applicators outlined in paragraph (a) of this section, and, if applicable, the specific standards for the each of the categories outlined in paragraphs (b) through (f) of this section in which a private applicator is to be certified.

(1) *Determination of competency by examination.* If the certifying authority uses an examination process to determine the competency of private applicators, the examination process must meet all of the requirements of § 171.103(a)(2).

(2) *Training for competency without examination.* Any candidate for certification as a private applicator may complete a training program approved by the certifying authority to establish competency. A training program to establish private applicator competency must conform to all of the following criteria:

(i) *Identification.* Each person seeking certification must present a valid, government-issued photo identification, or other form of similarly reliable identification authorized by the certifying authority, to the certifying authority or designated representative as proof of identity and age at the time of the training program to be eligible for certification.

(ii) *Training programs for private applicator general certification and category certification.*

(A) The training program for general private applicator certification must cover the competency standards outlined in paragraph (a) of this section in sufficient detail to allow the private applicator to demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides.

(B) The training program for each relevant category for private applicator certification must cover the competency standards outlined in paragraphs (b) through (f) of this section in sufficient detail to allow the private applicator to demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides for each category in which he or she intends to apply restricted use pesticides, and must be in addition to the training program required for general private applicator certification.

(i) *Exceptions.* The requirements in § 171.105(a)–(h) of this part do not apply to the following persons:

(1) Persons conducting laboratory research involving restricted use pesticides.

(2) Doctors of Medicine and Doctors of Veterinary Medicine applying restricted use pesticides to patients during the course of the ordinary practice of those professions.

§ 171.107 Standards for recertification of certified applicators.

(a) *Maintenance of continued competency.* Each commercial and private applicator certification shall expire five years after issuance, unless

the applicator is recertified in accordance with this section. A certifying authority may establish a shorter certification period. In order for a certified applicator's certification to continue without interruption, the certified applicator must be recertified under this section before the expiration of his or her current certification.

(b) *Process for recertification.* Minimum standards for recertification by written examination, or through continuing education programs, are as follows:

(1) *Written examination.* A certified applicator may be found eligible for recertification upon passing a written examination approved by the certifying authority and that is designed to evaluate whether the certified applicator demonstrates the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators. The examination shall conform to the applicable standards for examinations set forth in § 171.103(a)(2) of this part.

(2) *Continuing education programs.* A certified applicator may be found eligible for recertification upon successfully completing a continuing education program pursuant to the certifying authority's EPA-approved certification plan.

(i) The quantity, content, and quality of a continuing education program to maintain applicator certification must be sufficient to ensure the applicator continues to demonstrate the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators.

(ii) Any continuing education course or event relied upon for applicator recertification must be approved by the certifying authority as being suitable for its purpose in the certifying authority's recertification process.

(iii) A certifying authority must ensure that any continuing education course or event, including an online or other distance education course or event, relied upon for applicator recertification includes a process to verify the applicator's successful completion of the course or event.

■ 10. Subpart C is added to part 171 to read as follows:

Subpart C—Supervision of Noncertified Applicators

Sec.

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

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

(a) *Applicability.* This section applies to any certified applicator who allows or relies on a noncertified applicator to use a restricted use pesticide under the certified applicator's direct supervision.

(b) *General requirements.* (1) Requirements for the certified applicator.

(i) The certified applicator must have a practical knowledge of applicable Federal, State and Tribal supervisory requirements, including any requirements on the product label and labeling, regarding the use of restricted use pesticides by noncertified applicators.

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

(2) Requirements for the noncertified applicator. The certified applicator must ensure that each noncertified applicator using a restricted use pesticide under his or her direct supervision meets all of the following requirements before using a restricted use pesticide:

(i) The noncertified applicator has satisfied the qualification requirements under paragraph (c) of this section.

(ii) The noncertified applicator has been instructed within the last 12 months in the safe operation of any equipment he or she will use for mixing, loading, transferring, or applying pesticides.

(iii) The noncertified applicator has met the minimum age required to use restricted use pesticides under the supervision of a certified applicator. A noncertified applicator must be at least 18 years old, except that a noncertified applicator must be at least 16 years old if all of the following requirements are met:

(A) The noncertified applicator is using the restricted use pesticide under the direct supervision of a private applicator who is an immediate family member.

(B) The restricted use pesticide is not a fumigant, sodium cyanide, or sodium fluoroacetate.

(C) The noncertified applicator is not applying the restricted use pesticide aerially.

(3) Use-specific conditions that must be met in order for a noncertified applicator to use a restricted use pesticide. The certified applicator must ensure that all of the following requirements are met before allowing a noncertified applicator to use a restricted use pesticide under his or her direct supervision:

(i) The certified applicator must ensure that the noncertified applicator has access to the applicable product labeling at all times during its use.

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

(iii) The certified applicator must provide to each noncertified applicator before use of a restricted use pesticide instructions specific to the site and pesticide used. These instructions must include labeling directions, precautions, and requirements applicable to the specific use and site, and how the characteristics of the use site (*e.g.*, surface and ground water, endangered species, local population) and the conditions of application (*e.g.*, equipment, method of application, formulation) might increase or decrease the risk of adverse effects. The certified applicator must provide this information in a manner that the noncertified applicator can understand.

(iv) The certified applicator must ensure that before each day of use equipment used for mixing, loading, transferring, or applying pesticides is in proper operating condition as intended by the manufacturer, and can be used without risk of reasonably foreseeable adverse effects to the noncertified applicator, other persons, or the environment.

(v) The certified applicator must ensure that a means to immediately communicate with the certified applicator is available to each noncertified applicator using restricted use pesticides under his or her direct supervision.

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

(vii) If the certified applicator is a commercial applicator, the certified applicator must create or verify the existence of the records required by paragraph (e) of this section.

(c) *Noncertified applicator qualifications.* Before any noncertified applicator uses a restricted use pesticide under the direct supervision of the certified applicator, the supervising certified applicator must ensure that the noncertified applicator has met at least one of the following qualifications:

(1) The noncertified applicator has been trained in accordance with paragraph (d) of this section within the last 12 months.

(2) The noncertified applicator has met the training requirements for an agricultural handler under 40 CFR 170.501 of this title within the last 12 months.

(3) The noncertified applicator has met the requirements established by a certifying authority that meet or exceed the standards in § 171.201(c)(1).

(4) The noncertified applicator is currently a certified applicator but is not certified to perform the type of application being conducted or is not certified in the jurisdiction where the use will take place.

(d) *Noncertified applicator training program.* (1) General noncertified applicator training must be presented to noncertified applicators either orally from written materials or audiovisually. The information must be presented in a manner that the noncertified applicators can understand, such as through a translator. The person conducting the training must be present during the entire training program and must respond to the noncertified applicators' questions.

(2) The person who conducts the training must meet one of the following criteria:

(i) Be currently certified as an applicator of restricted use pesticides under this part.

(ii) Be currently designated as a trainer of certified applicators or pesticide handlers by EPA, the certifying authority, or a State, Tribal, or Federal agency having jurisdiction.

(iii) Have completed an EPA-approved pesticide safety train-the-trainer program for trainers of handlers under 40 CFR part 170.

(3) The noncertified applicator training materials must include the information that noncertified applicators need in order to protect themselves, other people, and the environment before, during, and after making a restricted use pesticide application. The noncertified applicator training materials must include, at a minimum, the following:

(i) Potential hazards from toxicity and exposure that pesticides present to noncertified applicators and their families, including acute and chronic effects, delayed effects, and sensitization.

(ii) Routes through which pesticides can enter the body.

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

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

(v) Routine and emergency decontamination procedures, including emergency eye flushing techniques. Noncertified applicators must be instructed that if pesticides are spilled or sprayed on the body, to immediately wash or to rinse off in the nearest clean water. Noncertified applicators must also be instructed to wash or shower with soap and water, shampoo hair, and change into clean clothes as soon as possible.

(vi) How and when to obtain emergency medical care.

(vii) After working with pesticides, wash hands before eating, drinking, using chewing gum or tobacco, or using the toilet.

(viii) Wash or shower with soap and water, shampoo hair and change into clean clothes as soon as possible after working with pesticides.

(ix) Potential hazards from pesticide residues on clothing.

(x) Wash work clothes before wearing them again and wash them separately from other clothes.

(xi) Do not take pesticides or pesticide containers used at work to your home.

(xii) Potential hazards to children and pregnant women from pesticide exposure.

(xiii) After working with pesticides, remove work boots or shoes before entering your home, and remove work clothes and wash or shower before physical contact with children or family members.

(xiv) How to report suspected pesticide use violations to the appropriate State or Tribal agency responsible for pesticide enforcement.

(xv) Format and meaning of information contained on pesticide labels and in labeling applicable to the safe use of the pesticide, including the location and meaning of the restricted use product statement, how to identify when the labeling requires the certified applicator to be physically present during the use of the pesticide, and information on personal protective equipment.

(xvi) Need for, and appropriate use and removal of, personal protective equipment.

(xvii) How to recognize, prevent, and provide first aid treatment for heat-related illness.

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

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

(xx) Restricted use pesticides may be used only by a certified applicator or by a noncertified applicator working under the direct supervision of a certified applicator.

(xxi) The certified applicator's responsibility to provide to each noncertified applicator instructions specific to the site and pesticide used. These instructions must include labeling directions, precautions, and requirements applicable to the specific use and site, and how the characteristics of the use site (*e.g.*, surface and ground water, endangered species, local population, and risks) and the conditions of application (*e.g.*, equipment, method of application, formulation, and risks) might increase or decrease the risk of adverse effects. The certified applicator must provide these instructions in a manner the noncertified applicator can understand.

(xxii) The certified applicator's responsibility to ensure that each noncertified applicator has access to the applicable product labeling at all times during its use.

(xxiii) The certified applicator's responsibility to ensure that where the labeling of a pesticide product requires that personal protective equipment be worn for mixing, loading, application, or any other use activities, each noncertified applicator has clean, labeling-required personal protective equipment in proper operating condition and that the personal protective equipment is worn and use correctly for its intended purpose.

(xxiv) The certified applicator's responsibility to ensure that before each day of use equipment used for mixing, loading, transferring, or applying pesticides is in proper operating condition as intended by the manufacturer, and can be used without risk of reasonably foreseeable adverse effects to the noncertified applicator, other persons, or the environment.

(xxv) The certified applicator's responsibility to ensure that a means to immediately communicate with the certified applicator is available to each noncertified applicator using restricted use pesticides under his or her direct supervision.

(e) *Recordkeeping.* (1) Commercial applicators must create or verify the existence of records documenting that each noncertified applicator has the qualifications required in paragraph (c) of this section. For each noncertified applicator, the records must contain the information appropriate to the method of qualification as provided in paragraphs (e)(1)(i) through (e)(1)(iv).

(i) If the noncertified applicator was trained in accordance with paragraph (c)(1) of this section, the record must contain all of the following information:

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

(B) The date the training requirement in paragraph (c) of this section was met.

(C) The name of the person who provided the training.

(D) The title or a description of the training provided.

(ii) If the noncertified applicator was trained as an agricultural handler under 40 CFR 170.501 in accordance with paragraph (c)(2) of this section, the record must contain all of the information required at 40 CFR 170.501(d)(1).

(iii) If the noncertified applicator qualified by satisfying the requirements established by the certifying authority, as described in paragraph (c)(3) of this section, the record must contain the information required by the certifying authority.

(iv) If the noncertified applicator is a certified applicator who is not certified to perform the type of application being conducted or not certified in the jurisdiction where the use will take place, as described in paragraph (c)(4) of this section, the record must include all of the following information:

(A) The noncertified applicator's name.

(B) The noncertified applicator's certification number.

(C) The expiration date of the noncertified applicator's certification.

(D) The certifying authority that issued the certification.

(2) The commercial applicator must create or verify the existence of the record containing the information in paragraph (e)(1) of this section before allowing the noncertified applicator to use restricted use pesticides under his or her direct supervision.

(3) The commercial applicator supervising any noncertified applicator must have access to records documenting the information required in paragraph (e)(1) of this section at the commercial applicator's principal place of business for two years from the date the noncertified applicator used the restricted use pesticide.

(f) *Exceptions.* The requirements in § 171.201(a) through (e) of this part do not apply to the following persons:

(1) Persons conducting laboratory research involving restricted use pesticides.

(2) Doctors of Medicine and Doctors of Veterinary Medicine applying restricted use pesticides to patients during the course of the ordinary practice of those professions.

■ 11. Subpart D is added to part 171 to read as follows:

Subpart D—Certification Plans

Sec.

171.301 General.
171.303 Requirements for State certification plans.
171.305 Requirements for Federal agency certification plans.
171.307 Certification of applicators in Indian country.
171.309 Modification and withdrawal of approval of certification plans.
171.311 EPA-administered applicator certification programs.

§ 171.301 General.

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

§ 171.303 Requirements for State certification plans.

(a) *Conformance with Federal standards for certification of applicators of restricted use pesticides.* A State may certify applicators of restricted use pesticides only in accordance with a State certification plan approved by the Agency. The State certification plan must meet all of the following requirements:

(1) The State certification plan must include a full description of the proposed process the State will use to assess applicator competency to use or supervise the use of restricted use pesticides in the State.

(2) The State certification plan must specify which of the certification categories listed in § 171.101 will be included in the plan.

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

(ii) A State certification plan may designate subcategories within the categories described in §§ 171.101 and 171.105(b) through (f) as it deems necessary.

(iii) A State certification plan may include additional certification categories not covered by the existing Federal categories described in §§ 171.101 and 171.105(b)–(f).

(iv) A State certification plan may combine the categories described in § 171.101(m) through (n) into a single general fumigation category for commercial applicators.

(v) A State certification plan may combine the categories described in § 171.105(d) through (e) into a single general fumigation category for private applicators.

(3) For each of the categories adopted pursuant to paragraph (b)(1) of this section, the State certification plan must include standards for the certification of applicators of restricted use pesticides that meet or exceed those standards prescribed by the Agency under §§ 171.101 through 171.105, except as provided in paragraph (a)(4) of this section.

(4) A State may adopt a limited use category for commercial applicators. A limited use category covers a small number of commercial applicators engaged in a use that does not clearly fit within any of the commercial applicator categories specified pursuant to paragraph (b)(2) of this section, and allows only the use of a limited set of restricted use pesticides by specific application methods. A State adopting a limited use category must include all of the following in its certification plan:

(i) A definition of the limited use category, specifying the restricted use pesticide(s), use sites, and specific application methods permitted.

(ii) An explanation of why it is not practical to include the limited use within any of the commercial applicator categories specified pursuant to paragraph (b)(2) of this section.

(iii) A requirement that candidates for certification in a limited use category pass the written examination covering the core standards at § 171.103(c) and demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticide(s) covered by the limited use category.

(iv) Specific competency standards for the limited use category.

(v) The process by which applicators must demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of the restricted use pesticides authorized under the limited use category based on the competency standards identified in paragraph (a)(4)(iv) of this section. This does not have to be accomplished by a written examination.

(vi) A description of the recertification standards for the limited use category and how those standards meet or exceed the standards prescribed by the Agency under § 171.107.

(vii) A description of the limited use certification credential. The credential must clearly state that the applicator is only authorized to purchase and use the specific restricted use pesticide(s) identified in that credential.

(5) The State certification plan must include standards for certification examinations that meet or exceed the standards prescribed by the Agency under § 171.103(a)(2), including a description of any alternative identification that a State will authorize in addition to a valid, government-issued photo identification.

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

(7) The State certification plan must include standards for the direct supervision of noncertified applicators by certified private and commercial applicators of restricted use pesticides that meet or exceed those standards prescribed by the Agency under § 171.201, or must state that use by noncertified applicators is not permitted.

(8) The State certification plan must describe the credentials or documents the State certifying authority will issue to each certified applicator verifying certification.

(9) A State may waive any or all of the procedures specified in § 171.103, § 171.105, and § 171.107 of this part when certifying applicators in reliance on valid current certifications issued by another State, Tribal, or Federal agency under an EPA-approved certification plan. The State certification plan must explain whether, and if so, under what circumstances, the State will certify applicators based in whole or in part on their holding a valid current certification issued by another State, Tribe or Federal agency. Such certifications are subject to all of the following conditions:

(i) A State may rely only on valid current certifications that are issued under an approved State, Tribal or Federal agency certification plan.

(ii) The State has examined the standards of competency used by the State, Tribe, or Federal agency that originally certified the applicator and has determined that, for each category of certification that will be accepted, they are comparable to its own standards.

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

(iv) The State issuing a certification based in whole or in part on the applicator holding a valid current certification issued by another State, Tribe or Federal agency must issue an appropriate State credential or document to the applicator.

(b) *Contents of an application for EPA approval of a State plan for certification of applicators of restricted use pesticides.*

(1) The application for Agency approval of a State certification plan must list and describe the categories of certification.

(2) The application for Agency approval of a State certification plan must contain satisfactory documentation that the State standards for the certification of commercial applicators meet or exceed those standards prescribed by the Agency under §§ 171.101 and 171.103. Such documentation must include one of the following:

(i) A statement that the State has adopted the same standards for certification of commercial applicators prescribed by the Agency under §§ 171.101 and 171.103 and a citation of the specific State laws and/or regulations demonstrating that the State has adopted such standards.

(ii) A statement that the State has adopted its own standards that meet or exceed the standards for certification of commercial applicators prescribed by the Agency under §§ 171.101 and 171.103. If the State selects this option, the application for Agency approval of a State certification plan must include all of the following:

(A) A list and detailed description of all the categories and subcategories to be used for certification of commercial applicators in the State and a citation to the specific State laws and/or regulations demonstrating that the State has adopted such categories and subcategories.

(B) A list and detailed description of all of the standards for certification of commercial applicators adopted by the State and a citation to the specific State laws and/or regulations demonstrating that the State has adopted such standards. Any additional categories or subcategories established by a State must be included in the application for Agency approval of a State plan and must clearly describe the standards the State will use to determine if the applicator has the necessary competency.

(C) A description of the State's commercial applicator certification examination standards and an explanation of how they meet or exceed the standards prescribed by the Agency under § 171.103(a)(2).

(3) The application for Agency approval of a State certification plan must contain satisfactory documentation that the State standards for the certification of private applicators meet or exceed those standards prescribed by the Agency under § 171.105. Such documentation must include a statement that the State has adopted its own standards that meet or exceed the standards for certification of private applicators of restricted use pesticides prescribed by the Agency under § 171.105. The application for Agency approval of a State certification plan must include all of the following:

(i) A list and detailed description of all the categories and subcategories to be used for certification of private applicators in the State and a citation to the specific State laws and/or regulations demonstrating that the State has adopted such categories and subcategories.

(ii) A list and detailed description of all of the standards for certification of private applicators adopted by the State and a citation to the specific State laws and/or regulations demonstrating that the State has adopted such standards. Any additional categories or subcategories established by a State must be identified in the application for Agency approval of a State plan and the application must clearly describe the standards the State will use to determine if the applicator has the necessary competency.

(iii) If private applicator certification is based upon written examination, a description of the State's private applicator certification examination standards and an explanation of how those meet or exceed the standards prescribed by the Agency under § 171.103(a)(2).

(iv) If private applicator certification is based upon training, an explanation of how the quantity, content, and quality of the State's training program ensure that a private applicator demonstrates the level of competency required § 171.105 for private applicators, addressing, at the minimum, all of the following factors:

(A) The quantity of training required to become certified as a private applicator.

(B) The content that is covered by the training and how the State ensures that required content is covered.

(C) The process the State uses to approve training programs for private applicator certification.

(D) How the State ensures the ongoing quality of the training program for private applicator certification.

(4) The application for Agency approval of a State certification plan must contain satisfactory documentation that the State standards for the recertification of applicators of restricted use pesticides meet or exceed those standards prescribed by the Agency under § 171.107. Such

documentation must include a statement that the State has adopted its own standards that meet or exceed the standards for recertification prescribed by the Agency under § 171.107. The application for Agency approval of a State certification plan must include all of the following:

(i) A list and detailed description of all of the State standards for recertification of private and commercial applicators, including the elements described in § 171.303(b)(4)(ii) through (iv), and a citation of the specific State laws and/or regulations demonstrating that the State has adopted such standards.

(ii) The certification period, which may not exceed five years.

(iii) If recertification is based upon written examination, a description of the State's process for reviewing, and updating as necessary, the written examination(s) to ensure that the written examination(s) evaluates whether a certified applicator demonstrates the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators.

(iv) If recertification is based upon continuing education, an explanation of how the quantity, content, and quality of the State's continuing education program ensures that a certified applicator continues to demonstrate the level of competency required by § 171.103 for commercial applicators or § 171.105 for private applicators, including but not limited to:

(A) The quantity of continuing education required to maintain certification.

(B) The content that is covered by the continuing education program and how the State ensures the required content is covered.

(C) The process the State uses to approve continuing education courses or events, including information about how the State ensures that any continuing education courses or events verify the applicator's successful completion of the course or event.

(D) How the State ensures the ongoing quality of the continuing education program.

(5) The application for Agency approval of a State certification plan must contain satisfactory documentation that the State standards for the direct supervision of noncertified applicators by certified private and commercial applicators of restricted use pesticides meet or exceed those standards prescribed by the Agency under § 171.201. Such documentation may include one or more of the following as applicable:

(i) A statement that the State has adopted the standards for direct supervision of noncertified applicators by certified private and/or commercial applicators prescribed by the Agency under § 171.201 and a citation of the specific State laws and/or regulations demonstrating that the State has adopted such standards.

(ii) A statement that the State prohibits noncertified applicators from using restricted use pesticides under the direct supervision of certified private and/or commercial applicators, and a citation of the specific State laws and/or regulations demonstrating that the State has adopted such a prohibition.

(iii) A statement that the State has adopted standards for direct supervision of noncertified applicators by certified private and/or commercial applicators that meet or exceed the standards prescribed by the Agency under § 171.201, a citation of the specific State laws and/or regulations demonstrating that the State has adopted such standards, and an explanation of how the State standards meet or exceed the standards prescribed by the Agency under § 171.201.

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

(i) A written statement by the Governor of the State designating a lead agency responsible for administering the State certification plan. The lead agency will serve as the central contact point for the Agency. The State certification plan must identify the primary point of contact at the lead agency responsible for administering the State certification plan and serving as the central contact for the Agency on any issues related to the State certification plan. In the event that more than one agency or organization will be responsible for performing functions under the State certification plan, the application for Agency approval of a State plan must identify all such agencies and organizations and list the functions to be performed by each, including compliance monitoring and enforcement responsibilities. The application for Agency approval of a State plan must indicate how these functions will be coordinated by the lead agency to ensure consistency of the administration of the State certification plan.

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

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

(iv) A commitment by the State that the lead agency and any cooperators will ensure sufficient resources are available to carry out the applicator certification program as detailed in the State certification plan.

(v) A document outlining the State's proposed approach and anticipated timeframe for implementing the State certification plan after EPA approves the State certification plan.

(7) The application for Agency approval of a State certification plan must include a complete copy of all State laws and regulations relevant to the State certification plan. In addition, the application for Agency approval of a State plan must include citations to the specific State laws and regulations that demonstrate specific legal authority for each of the following:

(i) Provisions for and listing of the acts which would constitute grounds for denying, suspending, and revoking certification of applicators. Such grounds must include, at a minimum, misuse of a pesticide, falsification of any records required to be maintained by the certified applicator, a criminal conviction under section 14(b) of FIFRA, a final order imposing civil penalty under section 14(a) of FIFRA, and conclusion of a State enforcement action for violations of State laws or regulations relevant to the State certification plan.

(ii) Provisions for reviewing, and where appropriate, suspending or revoking an applicator's certification based on any of the grounds listed in the plan pursuant to paragraph (b)(7)(i) of this section, or a criminal conviction under section 14(b) of FIFRA, a final order imposing civil penalty under section 14(a) of FIFRA, or conclusion of a State enforcement action for violations of State laws or regulations relevant to the State certification plan.

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

(iv) Provisions for right of entry by consent or warrant by State officials at reasonable times for sampling, inspection, and observation purposes.

(v) Provisions making it unlawful for persons other than certified applicators or noncertified applicators working under a certified applicator's direct

supervision to use restricted use pesticides.

(vi) Provisions requiring certified commercial applicators to record and maintain for the period of at least two years routine operational records containing information on types, amounts, uses, dates, and places of application of restricted use pesticides and for ensuring that such records will be available to appropriate State officials. Such provisions must require commercial applicators to record and maintain, at a minimum, all of the following:

(A) The name and address of the person for whom the restricted use pesticide was applied.

(B) The location of the restricted use pesticide application.

(C) The size of the area treated.

(D) The crop, commodity, stored product, or site to which the restricted use pesticide was applied.

(E) The time and date of the restricted use pesticide application.

(F) The brand or product name of the restricted use pesticide applied.

(G) The EPA registration number of the restricted use pesticide applied.

(H) The total amount of the restricted use pesticide applied per location per application.

(I) The name and certification number of the certified applicator that made or supervised the application, and, if applicable, the name of any noncertified applicator(s) that made the application under the direct supervision of the certified applicator.

(J) Records required under § 171.201(e).

(vii) Provisions requiring restricted use pesticide retail dealers to record and maintain at each individual dealership, for the period of at least two years, records of each transaction where a restricted use pesticide is distributed or sold to any person, excluding transactions solely between persons who are pesticide producers, registrants, wholesalers, or retail sellers, acting only in those capacities. Records of each such transaction must include all of the following information:

(A) Name and address of the residence or principal place of business of each certified applicator to whom the restricted use pesticide was distributed or sold, or if applicable, the name and address of the residence or principal place of business of each noncertified person to whom the restricted use pesticide was distributed or sold for application by a certified applicator.

(B) The certification number on the certification document presented to the seller evidencing the valid certification of the certified applicator authorized to purchase the restricted use pesticide, the State, Tribe or Federal agency that issued the certification document, the expiration date of the certified applicator's certification, and the category(ies) in which the applicator is certified relevant to the pesticide(s) sold.

(C) The product name and EPA registration number of the restricted use pesticide(s) distributed or sold in the transaction, including any applicable emergency exemption or State special local need registration number.

(D) The quantity of the restricted use pesticide(s) distributed or sold in the transaction.

(E) The date of the transaction.

(c) *Requirement to submit reports to the Agency.* The State must agree to submit the following reports to the Agency in a manner and containing the information that the Agency requires:

(1) An annual report to be submitted by the State lead agency to the Agency by the date established by the Agency that includes all of the following information:

(i) The number of new general private applicator certifications and recertifications issued during the last 12 month reporting period, and total number of applicators holding a valid general private applicator certification at the end of the last 12 month reporting period.

(ii) For each private applicator category specified in the certification plan, the numbers of new certifications and recertifications issued during the last 12 month reporting period, and the total number holding valid certifications in each category at the end of the last 12 month reporting period.

(iii) The numbers of new commercial applicator certifications and recertifications issued during the last 12 month reporting period, and the total number of applicators certified in at least one commercial applicator certification category at the end of the last 12 month reporting period.

(iv) For each commercial applicator certification category or subcategory specified in the certification plan, the numbers of new certifications and recertifications issued during the last 12 month reporting period, and the total number of commercial applicators holding a valid certification in each category or subcategory at the end of the last 12 month reporting period.

(v) A description of any modifications made to the approved certification plan during the last 12 month reporting period that have not been previously evaluated by the Agency under § 171.309(a)(3).

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

(vii) A summary of enforcement activities related to the use of restricted use pesticides during the last 12 month reporting period.

(2) Any other reports reasonably required by the Agency in its oversight of restricted use pesticides.

§ 171.305 Requirements for Federal agency certification plans.

(a) A Federal agency may certify applicators of restricted use pesticides only in accordance with a Federal agency certification plan approved by the Agency. Certification must be limited to the employees of the Federal agency covered by the certification plan and will be valid only for those uses of restricted use pesticides conducted in the performance of the employees' official duties.

(1) The Federal agency certification plan must include a full description of the proposed process the Federal agency will use to assess applicator competency to use or supervise the use of restricted use pesticides.

(2) Employees certified by the Federal agency must meet the standards for commercial applicators.

(3) The Federal agency certification plan must list and describe the categories of certification from the certification categories listed in § 171.101 that will be included in the plan except that:

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

(ii) A Federal agency certification plan may designate subcategories within the categories described in § 171.101 as it deems necessary.

(iii) A Federal agency certification plan may include additional certification categories not covered by the existing Federal categories described in § 171.101.

(iv) A Federal agency certification plan may combine the categories described in § 171.101(m) through (n) into a single general fumigation category for commercial applicators.

(4) For each of the categories adopted pursuant to paragraph (b)(1) of this section, the Federal agency plan must include standards for the certification of applicators of restricted use pesticides that meet or exceed those standards prescribed by the Agency under §§ 171.101 through 171.103, except as provided at paragraph (a)(5) of this section.

(5) A Federal agency may adopt a limited use category for commercial

applicators. A limited use category covers a small number of applicators engaged in a use that does not clearly fit within any of the categories in § 171.101, and allows only the use of a limited set of restricted use pesticides by specific application methods. A Federal agency adopting a limited use category must include all of the following in its certification plan:

(i) A definition of the limited use category, specifying the restricted use pesticide(s), use sites, and specific application methods permitted.

(ii) An explanation of why it is not practical to include the limited use category in any of the categories in § 171.101.

(iii) A requirement that candidates for certification in a limited use category pass the written examination covering the core standards at § 171.103(c) and demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticide(s) covered by the limited use category.

(iv) Specific competency standards for the limited use category.

(v) The process by which applicators must demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides covered by the limited use category based on the competency standards identified in paragraph (a)(5)(iv) of this section. This does not have to be accomplished by a written examination.

(vi) A description of the recertification standards for the limited use category and how those standards meet or exceed the standards prescribed by the Agency under § 171.107.

(vii) A description of the limited use certification credential. The credential must clearly state that the applicator is only authorized to purchase and use the specific restricted use pesticide(s) identified in that credential.

(6) The Federal agency standards for certification examinations must meet or exceed the standards prescribed by the Agency under § 171.103(a)(2), including a description of any alternative identification that the Federal agency will authorize in addition to a valid, government-issued photo identification.

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

(8) The Federal agency standards for the direct supervision of noncertified applicators by certified private and commercial applicators of restricted use pesticides must meet or exceed those standards prescribed by the Agency under § 171.201.

(9) The Federal agency certification plan must describe the credentials or documents the Federal agency will issue to each certified applicator verifying certification of applicators.

(10) A Federal agency may waive any or all of the procedures specified in § 171.103, § 171.105, and § 171.107 of this part when certifying applicators in reliance on valid current certifications issued by another State, Tribal, or Federal agency under an EPA-approved certification plan. The Federal agency certification plan must explain whether, and if so, under what circumstances, the Federal agency will certify applicators based in whole or in part on their holding a valid current certification issued by another State, Tribe or Federal agency. Such certifications are subject to all of the conditions listed at § 171.303(a)(9).

(b) *Contents of an application for EPA approval of a Federal agency plan for certification of applicators of restricted use pesticides.*

(1) The application for Agency approval of a Federal agency certification plan must list and describe the categories of certification.

(2) The application for Agency approval of a Federal agency certification plan must contain satisfactory documentation that the Federal agency standards for certification of commercial applicators meet or exceed those standards prescribed by the Agency under §§ 171.101 and 171.103. Such a statement must include one of the following:

(i) A statement that the Federal agency has adopted the same standards for certification prescribed by the Agency under §§ 171.101 through 171.103.

(ii) A statement that the Federal agency has adopted its own standards that meet or exceed the standards for certification prescribed by the Agency under §§ 171.101 through 171.103. If the Federal agency selects this option, the application for Agency approval of a Federal agency certification plan must include all of the following:

(A) A list and detailed description of all the categories and subcategories to be used for certification of commercial applicators.

(B) A list and detailed description of all of the standards for certification of commercial applicators adopted by the Federal agency. Any additional categories or subcategories established by a Federal agency must be included in the application for Agency approval of a Federal agency plan and must clearly describe the standards the Federal agency will use to determine if the applicator has the necessary competency.

(C) A description of the Federal agency's certification examination standards and an explanation of how those meet or exceed the standards prescribed by the Agency under § 171.103(a)(2).

(3) The application for Agency approval of a Federal agency plan must contain satisfactory documentation that the Federal agency standards for recertification of commercial applicators of restricted use pesticides meet or exceed the standards for recertification prescribed by the Agency under § 171.107. Such documentation must include a statement that the Federal agency has adopted its own standards that meet or exceed the standards for recertification prescribed by the Agency under § 171.107. The application for Agency approval of a Federal agency certification plan must include all of the following:

(i) A list and detailed description of all the standards for recertification adopted by the Federal agency.

(ii) The certification period, which may not exceed five years.

(iii) If recertification is based upon written examination, a description of the Federal agency's process for reviewing, and updating as necessary, the written examination(s) and to ensure that the written examination(s) evaluate whether a commercial applicator demonstrates the level of competency required by § 171.103.

(iv) If recertification is based upon continuing education, an explanation of how the quantity, content and quality of the Federal agency's continuing education program ensure that a commercial applicator continues to demonstrate the level of competency required by § 171.103 for commercial applicators, including but not limited to, all of the following:

(A) The quantity of continuing education required to maintain certification.

(B) The content that is covered by the continuing education program and how the Federal agency ensures the relevant content is covered.

(C) The process the Federal agency uses to approve continuing education training courses or events, including information about how the Federal agency ensures that any continuing education courses or events verify the commercial applicator's successful completion of the course or event.

(D) How the Federal agency ensures the ongoing quality of the continuing education program.

(4) The application for Agency approval of a Federal agency certification plan must contain satisfactory documentation that the Federal agency standards for direct supervision of noncertified applicators by commercial applicators meet or exceed those standards prescribed by the Agency under § 171.201. Such documentation may include one or more of the following as applicable:

(i) A statement that the Federal agency has adopted the standards for direct supervision of noncertified applicators by commercial applicators prescribed by the Agency under § 171.201.

(ii) A statement that the Federal agency prohibits noncertified applicators from using restricted use pesticides under the direct supervision of commercial applicators.

(iii) A statement that the Federal agency has adopted standards for direct supervision of noncertified applicators by commercial applicators that meet or exceed the standards prescribed by the Agency under § 171.201 and an explanation of how the Federal agency standards meet or exceed the standards prescribed by the Agency under § 171.201.

(5) The application for Agency approval of a Federal agency certification plan must meet or exceed all of the applicable requirements in § 171.303. However, in place of the legal authorities required in § 171.303(b)(7), the Federal agency may use administrative controls inherent in the employer-employee relationship to accomplish the objectives of § 171.303(b)(7). The application for Agency approval of a Federal agency certification plan must include a detailed description of how the Federal agency will exercise its administrative authority, where appropriate to deny, suspend or revoke certificates of employees who misuse pesticides, falsify records, or violate relevant provisions of FIFRA. Similarly, the application for Agency approval of a Federal agency certification plan must include a commitment that the Federal agency will record and maintain for the period of at least two years routine operational records containing information on types, amounts, uses, dates, and places of application of restricted use pesticides and that such records will be available to State and Federal officials. Such recordkeeping requirements must require Federal agency employees certified as commercial applicators to record and maintain, at a minimum, all of the records specified in § 171.303(b)(7)(vi).

(c) The application for Agency approval of a Federal agency certification plan must include a commitment by the Federal agency to submit an annual report to the Agency in a manner that the Agency requires that includes all of the following information:

(1) The numbers of new, recertified, and total commercial applicators certified in at least one certification category at the end of the last 12 month reporting period.

(2) For each commercial applicator certification category specified in § 171.101 or subcategory specified in the Federal agency certification plan, the numbers of new, recertified and total commercial applicators holding a valid certification in each of those categories at the end of the last 12 month reporting period.

(3) A description of any modifications made to the approved certification plan during the last 12 month reporting period that have not been previously evaluated under § 171.309(a)(3).

(4) A description of any proposed changes to the certification plan that may affect the certification program that the Federal agency anticipates making during the next reporting period.

(5) A summary of enforcement activities related to use of restricted use pesticides by applicators certified by the Federal agency during the last 12 month reporting period.

(d) The application for Agency approval of a Federal agency certification plan must include a commitment by the Federal agency to submit any other reports reasonably required by the Agency in its oversight of the use of restricted use pesticides.

(e) If applicators certified under the Federal agency plan will make any applications of restricted use pesticides in areas that are not subject to exclusive federal jurisdiction, the application for Agency approval of a Federal agency certification plan must meet all of the following additional requirements:

(1) The Federal agency plan must have a provision that affirms Federal agency certified applicators will comply with all applicable State and Tribal pesticide laws and regulations of the jurisdiction in which the restricted pesticide is being used when using restricted use pesticides areas that are not subject to exclusive federal jurisdiction, including any substantive State or Tribal standards in regard to qualifications for commercial applicator certification that exceed the Federal agency's standards.

(2) The Federal agency plan must have a provision for the Federal agency to notify the appropriate EPA Regional office and State or Tribal pesticide authority in the event of misuse or suspected misuse of a restricted use pesticide by a Federal agency employee and any pesticide exposure incident involving human or environmental harm that may have been caused by an application of a restricted use pesticide made by a Federal agency employee in an area not subject to exclusive federal jurisdiction.

(3) The Federal agency plan must have a provision for the Federal agency to cooperate with the Agency and the State or Tribal pesticide authority in any investigation or enforcement action undertaken in connection with an application of a restricted use pesticide made by a Federal agency employee in an area not subject to exclusive federal jurisdiction.

§ 171.307 Certification of applicators in Indian country.

All applicators of restricted use pesticides in Indian country must hold a certification valid in that area of Indian country, or be working under the direct supervision of a certified applicator whose certification is valid in that area of Indian country. An Indian Tribe may certify applicators of restricted use pesticides in Indian country only pursuant to a certification plan approved by the Agency that meets the requirements of paragraph (a) or (b) of this section. The Agency may implement a Federal certification plan, pursuant to paragraph (c) of this section and § 171.311, for an area of Indian country not covered by an approved plan.

(a) An Indian Tribe may choose to allow persons holding currently valid certifications issued under one or more specified State, Tribal, or Federal agency certification plans to use restricted use pesticides within the Tribe's Indian country.

(1) A certification plan under paragraph (a) of this section must consist of a written agreement between the Tribe and the relevant EPA Region(s) that contains all of the following information:

(i) A detailed map or legal description of the area(s) of Indian country covered by the plan.

(ii) A listing of the State(s), Tribe(s) or Federal agency(ies) upon whose certifications the Tribe will rely.

(iii) A description of any Tribal law, regulation, or code relating to application of restricted use pesticides in the covered area of Indian country, including a citation to each applicable Tribal law, regulation, or code.

(iv) A description of the procedures and relevant authorities for carrying out

compliance monitoring under and enforcement of the plan, including all of the following:

(A) A description of the Agency and Tribal roles and procedures for conducting inspections.

(B) A description of the Agency and Tribal roles and procedures for handling case development and enforcement actions and actions on certifications, including procedures for exchange of information.

(C) A description of the Agency and Tribal roles and procedures for handling complaint referrals.

(v) A description and copy of any separate agreements relevant to administering the certification plan and carrying out related compliance monitoring and enforcement activities. The description shall include a listing of all parties involved in each separate agreement and the respective roles, responsibilities, and relevant authorities of those parties.

(2) To the extent that an Indian Tribe is precluded from exercising criminal enforcement authority, the Federal government will exercise primary criminal enforcement authority in regard to a certification plan under paragraph (a) of this section. The Tribe and the relevant EPA Region(s) shall develop a procedure whereby the Tribe will provide potential investigative leads to EPA and/or other appropriate Federal agencies in an appropriate and timely manner. This procedure shall encompass, at a minimum, all circumstances in which the Tribe is precluded from exercising relevant criminal enforcement authority. This procedure shall be included as part of the agreement between the Tribe and relevant EPA Region(s) described in paragraph (a)(1) of this section.

(3) A plan for the certification of applicators under paragraph (a) of this section shall not be effective until the agreement between the Tribe and the relevant EPA Region(s) has been signed by the Tribe and the appropriate EPA Regional Administrator(s).

(b) An Indian Tribe may choose to develop its own certification plan for certifying private and commercial applicators to use or supervise the use of restricted use pesticides.

(1) A certification plan under paragraph (b) of this section shall consist of a written plan submitted by the Tribe to the Agency for approval that includes all of the following information:

(i) A detailed map or legal description of the area(s) of Indian country covered by the plan.

(ii) A demonstration that the plan meets all requirements of § 171.303 applicable to State plans, except that the Tribe's plan will not be required to meet the requirements of § 171.303(b)(6)(iii) with respect to provisions for criminal penalties, or any other requirement for assessing criminal penalties.

(2) To the extent that an Indian Tribe is precluded from exercising criminal enforcement authority, the Federal government will exercise primary criminal enforcement authority in regard to a certification plan under paragraph (b) of this section. The Tribe and the relevant EPA Region(s) shall develop a procedure whereby the Tribe will provide potential investigative leads to EPA and/or other appropriate Federal agencies in an appropriate and timely manner. This procedure shall encompass, at a minimum, all circumstances in which the Tribe is precluded from exercising relevant criminal enforcement authority and shall be described in a memorandum of agreement signed by the Tribe and the relevant EPA Regional Administrator(s).

(3) A plan for the certification of applicators under paragraph (b) of this section shall not be effective until the memorandum of agreement required under paragraph (b)(2) of this section has been signed by the Tribe and the relevant EPA Region(s) and the plan has been approved by the Agency.

(c) In any area of Indian country not covered by an approved certification plan, the Agency may, in consultation with the Tribe(s) affected, implement an EPA-administered certification plan under § 171.311 for certifying private and commercial applicators to use or supervise the use of restricted use pesticides.

(1) Prior to publishing a notice of a proposed EPA-administered certification plan for an area of Indian country in the **Federal Register** for review and comment under § 171.311(d)(3), the Agency shall notify the relevant Indian Tribe(s) of EPA's intent to propose the plan.

(2) The Agency will not implement an EPA-administered certification plan for any area of Indian country where, prior to the expiration of the notice and comment period provided under § 171.311(d)(3), the chairperson or equivalent elected leader of the relevant Tribe provides the Agency with a written statement of the Tribe's position that the plan should not be implemented.

§ 171.309 Modification and withdrawal of approval of certification plans.

(a) *Modifications to approved certification plans.* A State, Tribe, or Federal agency may make modifications to its approved certification plan, provided that all of the following conditions are met:

(1) *Determination of plan compliance.* Before modifying an approved certification plan, the State, Tribe, or Federal agency must determine that the proposed modifications will not impair the certification plan's compliance with the requirements of this part or any other Federal laws or regulations.

(2) *Requirement for Agency notification.* The State, Tribe, or Federal agency must notify the Agency of any plan modifications within 90 days after the final State, Tribal, or Federal agency plan modifications become effective or when it submits its required annual report to the Agency, whichever occurs first.

(3) *Additional requirements for substantial modifications to approved certification plans.* Before making any substantial modifications to an approved certification plan, the State, Tribe or Federal agency must consult with the Agency and obtain Agency approval of the proposed modifications. Substantial modifications include the following:

(i) Addition or deletion of a mechanism for certification and/or recertification.

(ii) Establishment of a new private applicator category, private applicator subcategory, commercial applicator category, or commercial applicator subcategory.

(iii) Any other changes that the Agency has notified the State, Tribal or Federal agency that the Agency considers to be substantial modifications.

(4) *Agency decision.* The Agency shall make a written determination regarding the modified certification plan's compliance with the requirements of this part. The Agency shall give the certifying authority submitting a certification plan notice and opportunity for an informal hearing before rejecting the plan. The Agency's approval may be subject to reasonable terms and conditions. If the Agency approves modifications to a certification plan, that approval shall specify a schedule for implementation of the modified certification plan.

(b) *Withdrawal of approval.* If at any time the Agency determines that a State, Tribal, or Federal agency certification plan does not comply with the requirements of this part or any other Federal laws or regulations, or that a State, Tribal, or Federal agency is not administering the certification plan as approved under this part, or that a State is not carrying out a program adequate to ensure compliance with FIFRA section 19(f), the Agency may withdraw

approval of the certification plan. Before withdrawing approval of a certification plan, the Agency will notify the State, Tribal, or Federal agency and provide the opportunity for an informal hearing. If appropriate, the Agency may allow the State, Tribe, or Federal agency a reasonable time, not to exceed 90 days, to take corrective action.

§ 171.311 EPA-administered applicator certification programs.

(a) *Applicability.* This section applies in any State or area of Indian country where there is no approved State or Tribal certification plan in effect.

(b) *Certification requirement.* In any State or area of Indian country where EPA administers a certification plan, any person who uses or supervises the use of any restricted use pesticide must meet one of the following criteria:

(1) A commercial applicator must be certified in each category and subcategory, if any, as described in the EPA-administered plan, for which the applicator is applying or supervising the application of restricted use pesticides.

(2) A private applicator must be certified in each category and subcategory, if any, as described in the EPA-administered plan, for which the applicator is applying or supervising the application of restricted use pesticides.

(3) A noncertified applicator may only use a restricted use pesticide under the direct supervision of an applicator certified under the EPA-administered plan, in accordance with the requirements in § 171.201, and only for uses in categories authorized by that certified applicator's certification.

(c) *Implementation of EPA-administered plans in States.*

(1) In any State where this section is applicable, the Agency, in consultation with the Governor, may implement an EPA-administered plan for the certification of applicators of restricted use pesticides.

(2) Such a plan will meet the applicable requirements of § 171.303. Prior to the implementation of the plan, the Agency will publish in the **Federal Register** for review and comment a summary of the proposed EPA-administered plan for the certification of applicators and will generally make available copies of the proposed plan within the State. The summary will include all of the following:

(i) An outline of the proposed procedures and requirements for private and commercial applicator certification and recertification.

(ii) A description of the proposed categories and subcategories for certification.

(iii) A description of any proposed conditions for the recognition of State, Tribal, or Federal agency certifications.

(iv) An outline of the proposed arrangements for coordination and communication between the Agency and the State regarding applicator certifications and pesticide compliance monitoring and enforcement.

(d) *Implementation of EPA-administered plans in Indian country.*

(1) In any area of Indian country where this section is applicable and consistent with the provisions of § 171.307(c), the Agency, in consultation with the appropriate Indian Tribe(s), may implement a plan for the certification of applicators of restricted use pesticides.

(2) An EPA-administered plan may be implemented in the Indian country of an individual Tribe or multiple Tribes located within a specified geographic area.

(3) Such a plan will meet the applicable requirements of § 171.303 and § 171.307(c). Prior to the implementation of the plan, the Agency will publish in the **Federal Register** for review and comment a summary of the proposed EPA-administered plan for the certification of applicators and will generally make available copies of the proposed plan within the area(s) of Indian country to be covered by the proposed plan. The summary will include all of the following:

(i) A description of the area(s) of Indian country to be covered by the proposed plan.

(ii) An outline of the proposed procedures and requirements for private and commercial applicator certification and recertification.

(iii) A description of the proposed categories and subcategories for certification.

(iv) A description of any proposed conditions for the recognition of State, Tribal, or Federal agency certifications.

(v) An outline of the proposed arrangements for coordination and communication between the Agency and the relevant Tribe(s) regarding applicator certifications and pesticide compliance monitoring and enforcement.

(e) *Denial, suspension, modification, or revocation of a certification.*

(1) The Agency may suspend all or part of a certified applicator's certification issued under an EPA-administered plan or, after opportunity for a hearing, may deny issuance of, or revoke or modify, an applicator's certification issued under an EPA-administered plan, if the Agency finds that the applicator has been convicted under FIFRA section 14(b), has been subject to a final order imposing a civil penalty under FIFRA section 14(a), or has committed any of the following acts:

(i) Used any registered pesticide in a manner inconsistent with its labeling.

(ii) Made available for use, or used, any registered pesticide classified for restricted use other than in accordance with FIFRA section 3(d) and any regulations promulgated thereunder.

(iii) Refused to keep and maintain any records required pursuant to this section.

(iv) Made false or fraudulent records, invoices or reports.

(v) Failed to comply with any limitations or restrictions on a valid current certificate.

(vi) Violated any other provision of FIFRA and the regulations promulgated thereunder.

(vii) Allowed a noncertified applicator to use a restricted use pesticide in a manner inconsistent with the requirements in § 171.201.

(viii) Violated any provision of a State, Tribal or Federal agency certification plan or its associated laws or regulations.

(2) If the Agency intends to deny, revoke, or modify an applicator's certification, the Agency will:

(i) Notify the applicator of all of the following:

(A) The legal and factual ground(s) upon which the denial, revocation, or modification is based.

(B) The time period during which the denial, revocation or modification is effective, whether permanent or otherwise.

(C) The conditions, if any, under which the applicator may become certified or recertified.

(D) Any additional conditions the Agency may impose.

(ii) Provide the applicator an opportunity to request an informal hearing prior to final Agency action to deny, revoke or modify the certification, and the opportunity to offer written statements of facts, explanations, comments, and arguments relevant to the proposed action.

(3) If a hearing is requested by an applicator pursuant to paragraph (e)(2)(ii) of this section, the Agency will appoint an attorney in the Agency as Presiding Officer to conduct an informal hearing. No person shall serve as Presiding Officer if he or she has had any prior connection with the specific case.

(4) The Presiding Officer appointed pursuant to paragraph (e)(3) of this section shall do all of the following:

(i) Conduct a fair, orderly and impartial hearing, without unnecessary delay.

(ii) Provide such procedural opportunities as the Presiding Officer may deem necessary to a fair and impartial hearing.

(iii) Consider all relevant evidence, explanation, comment and argument properly submitted.

(iii) Promptly notify the parties of the final decision and order. Such an order is a final Agency action subject to judicial review in accordance with FIFRA section 16.

(5) If the Agency determines that the public health, interest or welfare warrants immediate action to suspend the certified applicator's certification during the course of the procedures specified in paragraphs (e)(2) through (e)(4) of this section, the Agency will do all of the following:

(i) Notify the certified applicator of the ground(s) upon which the suspension action is based.

(ii) Notify the certified applicator of the time period during which the suspension is effective.

(iii) Notify the certified applicator of the Agency's intent to revoke or modify the certification, as appropriate, in accord with paragraph (e)(2) of this section. If such revocation or modification notice has not previously been issued, it must be issued at the same time the suspension notice is issued.

(6) In cases where the act constituting grounds for suspension of a certification is neither willful nor contrary to the public interest, health, or safety, the certified applicator may have additional procedural rights under 5 U.S.C. 558(c).

(7) Any notice, decision or order issued by the Agency under paragraph (e) of this section, and any documents and information considered by the Presiding Officer in issuing an order under paragraph (e)(4)(iv) of this section, shall be available to the public except as otherwise provided by FIFRA section 10 or by 40 CFR part 2. Any hearing at which oral testimony is presented shall be open to the public, except that the Presiding Officer may exclude the public to the extent necessary to allow presentation of information that may be entitled to confidentiality under FIFRA section 10 or under 40 CFR part 2.

(f) *Restricted use pesticide retail dealer reporting and recordkeeping requirements, availability of records, and failure to comply.*

(1) *Reporting requirements.* Each restricted use pesticide retail dealer in a State or area of Indian country where the Agency implements an EPA-administered plan must do both of the following:

(i) Report to the Agency the business name by which the restricted use pesticide retail dealer operates and the name and business address of each of his or her dealerships. This report must be submitted to the appropriate EPA Regional office no later than 60 days after the EPA-administered plan becomes effective or 60 days after the date the person becomes a restricted use pesticide retail dealer in an area where an EPA-administered plan is in effect, whichever occurs later.

(ii) Submit revisions to the initial report to the appropriate EPA Regional office reflecting any name changes, additions or deletions of dealerships. Revisions must be submitted to the appropriate EPA Regional office within 10 days of the occurrence of such change, addition or deletion.

(2) *Recordkeeping requirement.* A restricted use pesticide retail dealer is required to create and maintain records of each sale of restricted use pesticides to any person, excluding transactions solely between persons who are pesticide producers, registrants, wholesalers, or retail sellers, acting only in those capacities. Each restricted use pesticide retail dealer must maintain at each individual dealership records of each transaction where a restricted use pesticide is distributed or sold by that dealership to any person. Records of each such transaction must be maintained for a period of two years after the date of the transaction and must include all of the following information:

(i) Name and address of the residence or principal place of business of each certified applicator to whom the restricted use pesticide was distributed or sold, or if applicable, the name and address of the residence or principal place of business of each noncertified person to whom the restricted use pesticide was distributed or sold, for application by a certified applicator.

(ii) The certification number on the certification document presented to the seller evidencing the valid certification of the certified applicator authorized to purchase the restricted use pesticide, the State, Tribe or Federal agency that issued the certification document, the expiration date of the certified applicator's certification, and the category(ies) in which the certified applicator is certified relevant to the pesticide(s) sold.

(iii) The product name and EPA registration number of the restricted use pesticide(s) distributed or sold in the transaction, including any emergency exemption or State special local need registration number, if applicable.

(iv) The quantity of the restricted use pesticide(s) distributed or sold in the transaction.

(v) The date of the transaction.

(3) *Availability of required records.* Each restricted use pesticide retail dealer must, upon request of any authorized officer or employee of the Agency, or other authorized agent or person duly designated by the Agency, furnish or permit such person at all reasonable times to have access to and copy all records required to be maintained under this section.

(4) *Failure to comply.* Any person who fails to comply with the provisions of this section may be subject to civil or criminal sanctions, under FIFRA section 14, or 18 U.S.C. 1001.

[FR Doc. 2016–30332 Filed 1–3–17; 8:45 am]

BILLING CODE 6560–50–P

Message

From: Lantz, Tracy [Lantz.Tracy@epa.gov]
Sent: 1/17/2018 5:01:12 PM
To: Pont, Richard [Pont.Richard@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]
CC: Mosby, Jackie [Mosby.Jackie@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Overstreet, Anne [overstreet.anne@epa.gov]; Davis, Kathy [Davis.Kathy@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Han, Kaythi [Han.Kaythi@epa.gov]; Strauss, Linda [Strauss.Linda@epa.gov]; Wormell, Lance [Wormell.Lance@epa.gov]; Hopkins, Yvette [Hopkins.Yvette@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Sisco, Debby [Sisco.Debby@epa.gov]
Subject: RE: Revised AEZ Guidance document incorporating edits to address AAPCO/SFIREG state comments
Attachments: DRAFT AEZ HTC Fact Sheet for ITRMD + RP edits to address State comments.docx; DRAFT AEZ HTC Fact Sheet for ITRMD before comments.docx

Adding Debby Sisco. Also attaching the original version (prior to comments) for reference.

Tracy Lantz
Communications Services Branch
Field and External Affairs Division
Office of Pesticide Programs
Environmental Protection Agency
Office: (703) 308-6415
Ex. 6 Personal Privacy (PP)
Lantz.tracy@epa.gov

From: Pont, Richard
Sent: Wednesday, January 17, 2018 11:55 AM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>
Cc: Mosby, Jackie <Mosby.Jackie@epa.gov>; Keaney, Kevin <Keaney.Kevin@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>; Davis, Kathy <Davis.Kathy@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Strauss, Linda <Strauss.Linda@epa.gov>; Wormell, Lance <Wormell.Lance@epa.gov>; Hopkins, Yvette <Hopkins.Yvette@epa.gov>; Fitz, Nancy <Fitz.Nancy@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Park, Jennifer <park.jennifer@epa.gov>; Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>
Subject: Revised AEZ Guidance document incorporating edits to address AAPCO/SFIREG state comments

Rick,

Ex. 5 Deliberative Process (DP)

Richard Pont
Certification and Worker Protection Branch
U.S. EPA, Office of Pesticide Programs
phone: 703-305-6448
email: Pont.Richard@epa.gov
http://www.epa.gov/pesticides/health/protecting-workers.html

Message

From: Pont, Richard [Pont.Richard@epa.gov]
Sent: 1/17/2018 4:54:42 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]
CC: Mosby, Jackie [Mosby.Jackie@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Overstreet, Anne [overstreet.anne@epa.gov]; Lantz, Tracy [Lantz.Tracy@epa.gov]; Davis, Kathy [Davis.Kathy@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Han, Kaythi [Han.Kaythi@epa.gov]; Strauss, Linda [Strauss.Linda@epa.gov]; Wormell, Lance [Wormell.Lance@epa.gov]; Hopkins, Yvette [Hopkins.Yvette@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]
Subject: Revised AEZ Guidance document incorporating edits to address AAPCO/SFIREG state comments
Attachments: DRAFT AEZ HTC Fact Sheet for ITRMD + RP edits to address State comments.docx

Rick,

Ex. 5 Deliberative Process (DP)

Richard Pont
Certification and Worker Protection Branch
U.S. EPA, Office of Pesticide Programs
phone: 703-305-6448
email: Pont.Richard@epa.gov
http://www.epa.gov/pesticides/health/protecting-workers.html

Message

From: Lantz, Tracy [Lantz.Tracy@epa.gov]
Sent: 1/17/2018 2:51:53 PM
To: Herndon, George [Herndon.George@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]
CC: Naimy, Nina [Naimy.Nina@epa.gov]; Han, Kaythi [Han.Kaythi@epa.gov]; Overstreet, Anne [overstreet.anne@epa.gov]
Subject: STILL URGENT: AEZ draft web content and OPP update
Attachments: OPP update AEZ clarification guide 011618 with quotes.docx; DRAFT AEZ HTC Fact Sheet for ITRMD before comments.docx

Hi Jackie and Jeff,

Just sending your way again. I know you have both looked at this. OPP and OCSPP are asking about this, so hoping you will review and forward ASAP.

Thanks very much,

Tracy Lantz
Communications Services Branch
Field and External Affairs Division
Office of Pesticide Programs
Environmental Protection Agency
Office: (703) 308-6415
Ex. 6 Personal Privacy (PP)
Lantz.tracy@epa.gov

From: Lantz, Tracy
Sent: Tuesday, January 16, 2018 5:59 PM
To: Herndon, George <Herndon.George@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>
Cc: Overstreet, Anne <overstreet.anne@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>; Davis, Kathy <Davis.Kathy@epa.gov>; Keaney, Kevin <Keaney.Kevin@epa.gov>
Subject: URGENT: AEZ draft web content and OPP update

Hi Jeff,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,

Tracy Lantz
Communications Services Branch
Field and External Affairs Division
Office of Pesticide Programs
Environmental Protection Agency
Office: (703) 308-6415
Ex. 6 Personal Privacy (PP)
Lantz.tracy@epa.gov

Message

From: Lantz, Tracy [Lantz.Tracy@epa.gov]
Sent: 1/16/2018 10:58:51 PM
To: Herndon, George [Herndon.George@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]
CC: Overstreet, Anne [overstreet.anne@epa.gov]; Han, Kaythi [Han.Kaythi@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Davis, Kathy [Davis.Kathy@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]
Subject: URGENT: AEZ draft web content and OPP update
Attachments: OPP update AEZ clarification guide 011618 with quotes.docx; DRAFT AEZ HTC Fact Sheet for ITRMD before comments.docx

Hi Jeff,

Ex. 5 Deliberative Process (DP)

Tracy Lantz
Communications Services Branch
Field and External Affairs Division
Office of Pesticide Programs
Environmental Protection Agency
Office: (703) 308-6415
Ex. 6 Personal Privacy (PP)
Lantz.tracy@epa.gov

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 1/2/2018 9:25:54 PM
To: Mosby, Jackie [Mosby.Jackie@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]
CC: Keaney, Kevin [Keaney.Kevin@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Davis, Kathy [Davis.Kathy@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]
Subject: WPS and C&T Meeting with Charlotte on Jan. 4th @ 1 pm ?
Attachments: Updated WPS AEZ Guidance/Fact Sheet; WPS presentation for OGC review (presentation is Tuesday, January 9th)

Hello –

We have a WPS and C&T meeting with Charlotte this Thursday, Jan. 4th at 1 p.m.

Ex. 5 Deliberative Process (DP)

Jeanne Kasai EPA – Office of Chemical Safety & Pollution Prevention, Office of Pesticide Programs
tel. 703-308-3240, kasai.jeanne@epa.gov http://www.epa.gov/pesticide-worker-safety

Message

From: Fitz, Nancy [Fitz.Nancy@epa.gov]
Sent: 1/2/2018 7:32:21 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]; Hughes, Hayley [hughes.hayley@epa.gov]; Sisco, Debby [Sisco.Debby@epa.gov]; Dinkins, Darlene [Dinkins.Darlene@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Overstreet, Anne [overstreet.anne@epa.gov]
CC: Davis, Kathy [Davis.Kathy@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Lantz, Tracy [Lantz.Tracy@epa.gov]
Subject: Updated WPS AEZ Guidance/Fact Sheet
Attachments: DRAFT AEZ HTC Fact Sheet 1-2-18 v4.docx; AEZ animation - general.pptx; AEZ animation - people in AEZ off establishment.pptx; Nancy Beck comments DRAFT AEZ HTC Fact Sheet 12-20-17.2.docx

Rick,

Ex. 5 Deliberative Process (DP)

Nancy Fitz
Office of Pesticide Programs
U.S. Environmental Protection Agency
phone: 703-305-7385
email: fitz.nancy@epa.gov
web site: http://www.epa.gov/pesticides/regulating/containers.htm

Message

From: EPA Pesticides Programs [oppt.epa@public.govdelivery.com]
Sent: 12/14/2017 4:58:31 PM
To: Herndon, George [Herndon.George@epa.gov]
Subject: Pesticide Program Update: EPA Initiates Rulemaking to Revise Certain Aspects of the Agricultural Worker Protection Standard (WPS) and the Certification and Training (C&T) Rule; Implementation Dates for WPS and C&T Remain In Effect

EPA Pesticide Program Updates

From EPA's Office of Pesticide Programs

www.epa.gov/pesticides

December 14, 2017

In This Update:

EPA Initiates Rulemaking to Revise Certain Aspects of the Agricultural Worker Protection Standard (WPS) and the Certification and Training (C&T) Rule; Implementation Dates for WPS and C&T Remain In Effect

Agricultural Worker Protection Standard (WPS)

EPA has initiated a process to revise certain requirements in the WPS. By the end of FY2018, EPA expects to publish a Notice of Proposed Rulemaking to solicit public input on proposed revisions to the WPS requirements for minimum ages, designated representatives, and application exclusion zones. The compliance dates in the revised WPS published on November 2, 2015, remain in effect; the Agency does not intend to extend them.

Certification and Training (C&T, or Certification of Pesticide Applicators) Rule

EPA has initiated a process to revise the minimum age requirements in the C&T rule. EPA expects to publish a Notice of Proposed Rulemaking to solicit public input on proposed revisions to the rule by the end of FY2018. The implementation dates in the January 4, 2017, final rule, (1) for certifying authorities to submit revised certification plans and (2) for EPA to act on those plans remain in effect; EPA has no plans to change those implementation dates.

Learn more about the WPS

Learn more about the C&T Rule

EPA distributes its Pesticide Program Updates to external stakeholders and citizens who have expressed an interest in the agency's pesticide program activities and decisions. This update service is part of EPA's continuing effort to improve public access to federal pesticide information.

For general questions about pesticides and pesticide poisoning prevention, contact the National Pesticide Information Center (NPIC), by email at npic@ace.orst.edu or, by visiting http://npic.orst.edu.

For information about ongoing activities in the Office of Pesticide Programs, visit our homepage at: https://www.epa.gov/pesticides

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This service is provided to you at no charge by the U.S. Environmental Protection Agency.

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This email was sent to herndon.george@epa.gov using GovDelivery Communications Cloud on behalf of: U.S. EPA Office of Chemical Safety and Pollution Prevention · 707 17th St, Suite 4000 · Denver, CO 80202 · 1-800-439-1420

govdelivery

Message

From: Mosby, Jackie [Mosby.Jackie@epa.gov]
Sent: 12/12/2017 3:51:28 PM
To: Pont, Richard [Pont.Richard@epa.gov]
CC: Keaney, Kevin [Keaney.Kevin@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Davis, Kathy [Davis.Kathy@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]
Subject: Re: AEZ and Soil Fumigants

Richard thanks. I will forward to Rick

Sent from my iPhone

On Dec 12, 2017, at 10:49 AM, Pont, Richard <Pont.Richard@epa.gov> wrote:

Jackie/Kevin,

Ex. 5 Deliberative Process (DP)

Please have Rick let us know if he has additional questions.

Richard Pont
Certification and Worker Protection Branch
U.S. EPA, Office of Pesticide Programs
phone: 703-305-6448
email: Pont.Richard@epa.gov
http://www.epa.gov/pesticides/health/protecting-workers.html

From: Mosby, Jackie
Sent: Tuesday, December 12, 2017 10:35 AM
To: Keaney, Kevin <Keaney.Kevin@epa.gov>
Cc: Fitz, Nancy <Fitz.Nancy@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Herndon, George <Herndon.George@epa.gov>
Subject: Fwd: AEZ and Soil Fumigants

See Rick's question about Alex and fumigant.

Sent from my iPhone

Begin forwarded message:

> **From:** "Keigwin, Richard" <Keigwin.Richard@epa.gov>
> **Date:** December 12, 2017 at 10:29:23 AM EST
> **To:** "Guilaran, Yu-Ting" <Guilaran.Yu-Ting@epa.gov>, "Mosby, Jackie" <Mosby.Jackie@epa.gov>, "Keaney, Kevin" <Keaney.Kevin@epa.gov>
> **Subject: AEZ and Soil Fumigants**
>
> What guidance do we have regarding how the AEZ provisions of the WPS intersect with the soil fumigant labels? I'm getting some questions from some of the fumigant registrants.
>
> Rick Keigwin
> Director, Office of Pesticide Programs
> U.S. Environmental Protection Agency
> Phone: 703-305-7090
> Website: www.epa.gov/pesticides
> Sent from my iPhone

Message

From: Pont, Richard [Pont.Richard@epa.gov]
Sent: 12/12/2017 3:49:49 PM
To: Mosby, Jackie [Mosby.Jackie@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]
CC: Fitz, Nancy [Fitz.Nancy@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Davis, Kathy [Davis.Kathy@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]
Subject: RE: AEZ and Soil Fumigants

Jackie/Kevin,

Ex. 5 Deliberative Process (DP)

Richard Pont
Certification and Worker Protection Branch
U.S. EPA, Office of Pesticide Programs
phone: 703-305-6448
email: Pont.Richard@epa.gov
http://www.epa.gov/pesticides/health/protecting-workers.html

From: Mosby, Jackie
Sent: Tuesday, December 12, 2017 10:35 AM
To: Keaney, Kevin <Keaney.Kevin@epa.gov>
Cc: Fitz, Nancy <Fitz.Nancy@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Herndon, George <Herndon.George@epa.gov>
Subject: Fwd: AEZ and Soil Fumigants

See Rick's question about Alex and fumigant.

Sent from my iPhone

Begin forwarded message:

> **From:** "Keigwin, Richard" <Keigwin.Richard@epa.gov>
> **Date:** December 12, 2017 at 10:29:23 AM EST
> **To:** "Guilaran, Yu-Ting" <Guilaran.Yu-Ting@epa.gov>, "Mosby, Jackie"

<Mosby.Jackie@epa.gov>, "Keaney, Kevin" <Keaney.Kevin@epa.gov>
Subject: AEZ and Soil Fumigants

What guidance do we have regarding how the AEZ provisions of the WPS intersect with the soil fumigant labels? I'm getting some questions from some of the fumigant registrants.

Rick Keigwin
Director, Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: 703-305-7090
Website: www.epa.gov/pesticides
Sent from my iPhone

Message

From: Fitz, Nancy [Fitz.Nancy@epa.gov]
Sent: 8/25/2016 7:09:18 PM
To: Housenger, Jack [Housenger.Jack@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]
CC: Pont, Richard [Pont.Richard@epa.gov]; Davis, Kathy [Davis.Kathy@epa.gov]; Schroeder, Carolyn [Schroeder.Carolyn@epa.gov]; Arling, Michelle [Arling.Michelle@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Subject: FW: AAPCO Letter sent to EPA
Attachments: Letter to Jack Housenger WPS_AEZ.pdf; ATT00001.htm

FYI – A letter from AACPO to Jack on WPS. I guess that Jack has probably seen it but it hadn't filtered down to us yet so I'm passing it along to everyone.

Nancy Fitz
Office of Pesticide Programs
U.S. Environmental Protection Agency
phone: 703-305-7385
email: fitz.nancy@epa.gov
web site: http://www.epa.gov/pesticides/regulating/containers.htm

From: Terada, Derrick
Sent: Thursday, August 25, 2016 2:30 PM
To: Pont, Richard <Pont.Richard@epa.gov>; Fitz, Nancy <Fitz.Nancy@epa.gov>; Davis, Kathy <Davis.Kathy@epa.gov>
Subject: FW: AAPCO Letter sent to EPA

Hey all, I don't know if you've seen this already, but Rose from ODA sent it to me as an FYI.

Derrick Terada
Pesticides and Toxics Unit
Office of Compliance and Enforcement
U.S. EPA, Region 10, Suite 900
1200 Sixth Avenue, OCE-101
Seattle, WA 98101
P: (206) 553-4768

From: Rose Kachadoorian [mailto:rkachadoorian@oda.state.or.us]
Sent: Thursday, August 25, 2016 11:18 AM
To: Terada, Derrick <Terada.Derrick@epa.gov>; McFadden, Kelly <McFadden.Kelly@epa.gov>; Liu, Linda <Liu.Linda@epa.gov>
Subject: WPS: AAPCO Letter sent to EPA

August 17, 2016

Jack Housenger, Director
Office of Pesticide Programs
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Director Housenger,

I am writing to you about two issues regarding the revisions to the Agricultural Worker Protection Standard (WPS) that were recently brought to my attention by several Pesticide State Lead Agencies (SLAs). The issues of concern are the availability of the Train-the-Trainer training materials and the Interpretive Guidance regarding Application Exclusion Zones (AEZ).

It is my understanding the Train-the-Trainer training materials will not be available until possibly November 2016. However, starting in January of 2017, trainers of workers must be: (1) certified applicators; (2) designated as trainers by EPA or the State or Tribal agency responsible for pesticide enforcement; or (3) have completed and EPA approved Train-the-Trainer course. Because of the lack of adequate time (2 months) for states to train trainers, or for currently non-certified applicators to become certified, AAPCO is requesting that EPA consider requiring the implementation of the new trainer requirements to coincide with when the new 2018 requirements take effect. This is especially important for states that do not currently have a Train-the-Trainer Program, but will initiate a Train-the-Trainer Program when the new EPA Train the Trainer materials are available.

In regards to the Application Exclusion Zone (AEZ), it is my understanding that EPA is working on an Interpretive Guidance on how to apply the (AEZ) in the field. AAPCO is requesting that EPA consider postponing its adoption until adequate discussion has occurred, and State Lead Agencies and the regulated growers and applicators have had time to comment, and familiarize themselves with the new requirements.

In addition, in regard to agricultural labor housing on a grower's property, AAPCO is requesting that EPA consider allowing SLAs the option of developing an equivalency program, which would

enable farm workers to safely "shelter in place" vs. leaving the AEZ. A number of states have stringent agricultural labor housing regulations or standards. It is believed by many, that if the housing is adequate (fully enclosed and tightly constructed), it is safer to "shelter in place" vs. leaving the AEZ and returning soon after the application. The option of an equivalency program would provide flexibility, and encourage growers to improve labor housing to meet equivalency standards.

Thank you for your attention and consideration of these issues. I look forward to your response and or further discussion.

Respectfully,

Dennis W. Howard

Dennis W. Howard
AAPCO President
Chief Pesticide Regulation Section
Maryland Department of Agriculture

cc: Amy Bamber, AAPCO Executive Secretary

Message

From: Keigwin, Richard [Keigwin.Richard@epa.gov]
Sent: 9/12/2016 4:53:10 PM
To: Mosby, Jackie [Mosby.Jackie@epa.gov]; Herndon, George [Herndon.George@epa.gov]
Subject: FW: AAPCO Letter sent to EPA
Attachments: Letter to Jack Housenger WPS_AEZ.pdf; ATT00001.htm

Ex. 5 Deliberative Process (DP)

From: Fitz, Nancy
Sent: Thursday, August 25, 2016 3:09 PM
To: Housenger, Jack <Housenger.Jack@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Keaney, Kevin <Keaney.Kevin@epa.gov>
Cc: Pont, Richard <Pont.Richard@epa.gov>; Davis, Kathy <Davis.Kathy@epa.gov>; Schroeder, Carolyn <Schroeder.Carolyn@epa.gov>; Arling, Michelle <Arling.Michelle@epa.gov>; Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>; Park, Jennifer <park.jennifer@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>
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Subject: WPS: AAPCO Letter sent to EPA

August 17, 2016

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Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
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Respectfully,

Dennis W. Howard

Dennis W. Howard
AAPCO President
Chief Pesticide Regulation Section
Maryland Department of Agriculture

cc: Amy Bamber, AAPCO Executive Secretary

Message

From: Mosby, Jackie [Mosby.Jackie@epa.gov]
Sent: 2/11/2019 8:22:32 PM
To: Overstreet, Anne [overstreet.anne@epa.gov]
CC: OPP FEAD CWPB [OPP_FEAD_CWPB@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Herndon, George [Herndon.George@epa.gov]
Subject: FW: Current Draft Revisions to WPS Rule
Attachments: Cost Analysis AEZ 02.06.wfm. IO 2.11.19.pdf; 2.6.19 AgWPS Revision RPK. IO 2.11.19.pdf

All, Thanks for your work on the AEZ rule, please see Charlotte and Nancy's comments. Also, sorry, but we expect more comments (see note below). Jackie

---

From: Keller, Kaitlin
Sent: Monday, February 11, 2019 2:25 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>
Cc: Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Layne, Arnold <Layne.Arnold@epa.gov>
Subject: RE: Current Draft Revisions to WPS Rule

All,

Charlotte and Nancy's comments are combined in the attached hard copy draft. No comments from Erik. Alex is finishing her review possibly this afternoon. Will send those comments when I have them.

Thanks,
Kaitlin

From: Keigwin, Richard
Sent: Wednesday, February 06, 2019 7:30 PM
To: Dunn, Alexandra <dunn.alexandra@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
Cc: Keller, Kaitlin <keller.kaitlin@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Layne, Arnold <Layne.Arnold@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: Current Draft Revisions to WPS Rule

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Rick Keigwin
Director, Office of Pesticide Programs
US Environmental Protection Agency
Phone: 703-305-7090
Email: keigwin.richard@epa.gov
Visit: https://www.epa.gov/pesticides

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 2/12/2019 7:56:05 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]; Overstreet, Anne [overstreet.anne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]
CC: Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]
Subject: Edit made: here are WPS AEZ documents ready to go
Attachments: Cost Analysis AEZ 2019 02 11.docx; Cost Analysis AEZ 02.06.wfm. IO 2.11.19.pdf; Clean WPS NPRM FRNotice AEZ 2.12.19 v2.docx; 2.12.19v2 DRAFT Track Changes_AgWPS-Revision_NPRM_FRdocument_AEZ_.docx; 2.6.19 AgWPS Revision RPK. IO 2.12.19.pdf

Importance: High

Ex. 5 Deliberative Process (DP)

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Anne Overstreet, Chief

Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs (7510P)
U.S. Environmental Protection Agency
(703) 308-8068
Overstreet.anne@epa.gov
http://www.epa.gov/pesticides

From: Keigwin, Richard
Sent: Tuesday, February 12, 2019 5:19 AM
To: Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Cc: Messina, Edward <Messina.Edward@epa.gov>
Subject: Fwd: Current Draft Revisions to WPS Rule

Before 3pm today, please give us an ETA on revisions to the draft rule and cost savings document. Albeit based upon a quick look at the comments, it would seem that we could turn around revisions today.

Rick Keigwin
Director, Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: 703-305-7090
Website: www.epa.gov/pesticides
Sent from my iPhone

Begin forwarded message:

> **From:** "Keller, Kaitlin" <keller.kaitlin@epa.gov>
> **To:** "Keigwin, Richard" <Keigwin.Richard@epa.gov>
> **Cc:** "Messina, Edward" <Messina.Edward@epa.gov>, "Miller, Wynne" <Miller.Wynne@epa.gov>, "Mosby, Jackie" <Mosby.Jackie@epa.gov>, "Hofmann, Angela" <Hofmann.Angela@epa.gov>, "Tyree, JamesN" <tyree.jamesn@epa.gov>, "Layne, Arnold" <Layne.Arnold@epa.gov>
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> **Cc:** Keller, Kaitlin <keller.kaitlin@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Layne, Arnold <Layne.Arnold@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>
> **Subject:** Current Draft Revisions to WPS Rule

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Rick Keigwin
Director, Office of Pesticide Programs
US Environmental Protection Agency
Phone: 703-305-7090
Email: keigwin.richard@epa.gov
Visit: https://www.epa.gov/pesticides

Message

From: Overstreet, Anne [overstreet.anne@epa.gov]
Sent: 2/12/2019 5:02:48 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]
CC: Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]
Subject: 2/12/19 Updates to NPRM/Cost Analysis - WPS AEZ -
Attachments: 2.6.19 AgWPS Revision RPK. IO 2.11.19.pdf; 2.12.19JK DRAFT Track Changes_AgWPS-Revision_NPRM_FRdocument_AEZ .docx; Cost Analysis AEZ 2019 02 11.docx; Cost Analysis AEZ 02.06.wfm. IO 2.11.19.pdf; Clean WPS NPRM FRNotice AEZ 2.12.19.docx

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> **Subject:** Current Draft Revisions to WPS Rule

Ex. 5 Deliberative Process (DP)

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Rick Keigwin
Director, Office of Pesticide Programs
US Environmental Protection Agency
Phone: 703-305-7090
Email: keigwin.richard@epa.gov
Visit: https://www.epa.gov/pesticides

United States Senate
WASHINGTON, DC 20510

March 12, 2018

The Honorable Scott Pruitt
Administrator
U.S Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Washington, DC 20460

Dear Mr. Administrator:

We write to express our alarm with the Environmental Protection Agency's (EPA) announcement that it seeks to open up for reconsideration two federal safeguards vital to the protection of the children, women and men that labor in agriculture and apply chemicals in agricultural, commercial and residential settings. With the lives of children and families across the country at stake, we urge you to preserve the protections provided by the final Agricultural Worker Protection Standard rule (WPS) and Certification of Pesticide Applicators rule (CPA) (as published in the Federal Register on November 2, 2015 and January 4, 2017, respectively), and to resolve any clarifications needed by the regulated community via additional guidance on the rules.

We recognize the important role that pesticides play in the United States, particularly in the agricultural sector. However, precautions must be taken to safeguard the public and the most exposed and vulnerable populations from pesticide related illness, injury and death caused by these potentially toxic chemicals. To this end, the EPA finalized revisions to the WPS in the fall of 2015, and the CPA rule in January 2017.

To understand the relevance of these two rules, we must first acknowledge the people whose lives they protect and how their training and wellbeing is inextricably linked to our health and safety. The WPS applies to workers and pesticide handlers that labor in farms, fields, nurseries, greenhouses and forests. The CPA rule governs the training and certification requirements of workers who apply Restricted Use Pesticides (RUPs) in, on, or around settings such as homes, schools, hospitals and industrial establishments. These rules protect not only the workers that handle and are exposed to pesticides, but also areas around agricultural land and the children who may incidentally come in contact with the pesticides. From our homes to children's schools and agricultural operations across the nation, these federal protections safeguard our families and weakening them undermines the health and safety of all.

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We are concerned that the EPA is unjustifiably reconsidering the minimum age protections that prohibit children from applying pesticides, the right of farmworkers to access pesticide-application information and Safety Data Sheets (SDS) through a designated representative, and protections for bystanders through "application exclusion zones," which requires that an applicator suspend pesticide application if "an unprotected/non-trained person" enters the area around the application equipment. We strongly feel that undermining these important protections cannot be justified, especially considering that the CPA rule governs the training and certification requirements for using RUPs in, on, or in residential settings, schools, hospitals, and industrial establishments.

RUPs are the most toxic pesticides on the market, and their misuse has resulted in serious harm and death. These pesticides are not available for purchase by the general public because they have "the potential to cause unreasonable adverse effects to the environment and injury to applicators or bystanders without added restrictions." RUPs can only be used by an individual that is a certified pesticide applicator or is under the direct supervision of a certified applicator. These rules were revised to prevent farmworker poisonings and in the aftermath of pesticide misuse that led to serious harm for hundreds of homeowners and their families, and resulted in the tragic deaths of children. These tragic incidents – all of which could have been prevented with stronger safeguards in place – highlight the significance of ensuring that workers who handle pesticides are adequately trained and understand the hazards posed by the chemicals that they are applying so that they can effectively protect themselves and others from occupational and take-home exposures.

Congress specifically intended for the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) to protect workers and other persons from occupational exposure directly to pesticides or to their residues. Honoring this mandate is crucial to protecting the health and safety of rural communities and the broader public since it is up to the EPA and not the Occupational Safety and Health Administration to set minimum protections from pesticide exposure. Furthermore, without the life-saving requirements provided by the WPS and CPA rules, there is little to deter the unlawful use of hazardous pesticides since FIFRA only authorizes a misdemeanor charge even when pesticide misuse results in death.

Additionally, the agency is ignoring the advice of the Pesticide Program Dialogue Committee—a broadly representative federal advisory committee—that met to discuss these rules, raised the importance of education for the regulated community while echoing consensus about the preservation of the minimum age requirements, the designated representative provision, and the application exclusion zone to protect workers and bystanders from pesticides.

To set the record straight on misleading concerns about these fundamental requirements:

- The new rules prohibit employers from requiring youth under the age of 18 from applying pesticides or performing "early-entry" work in areas where pesticides were recently applied. This is extremely important because pesticides can impact developing brains and bodies. There are currently half a million children under the age of 18 working in agriculture, including some as young as elementary school age. The minimum age requirement in both rules accounts for the needs of family-owned businesses and operators by exempting immediate family of the owner-operator of agricultural establishments, and private or commercial pesticide applicator businesses. Specifically, "immediate family" is broadly defined to include the "owner's spouse, parents, step parents, foster parents, father-in-law, mother-in-law, children, stepchildren, foster children, sons-in-law, daughters-in-law, grandparents, grandchildren, brothers, sisters, brothers-in-law, sisters-in-law, aunts, uncles, nieces, nephews, and first cousins."

- The designated representative provision is critically important because there are many reasons why a worker may be unable to access information about the chemicals that they are exposed to, including but not limited to educational and language barriers as well as immigration status, illness or injury. This commonsense safeguard has been denied to farmworkers while workers in other industries have had these protections for decades. The safety information that would be accessible by a designated representative would be non-confidential, non-proprietary information about the pesticide a worker has been exposed to. There are several examples of injured farmworkers who have been denied access to safety information after injury. These farmworkers should be able to access this information on their own or through a representative that they trust, such as a co-worker, spouse, healthcare provider, union representative, social worker, or attorney.

- The application exclusion zone merely requires the common-sense precaution that if someone is applying pesticides and sees workers or other people around the equipment, they should try to avoid spraying them by suspending the application and resuming after a non-trained and unprotected person leaves the area. EPA does not account for workers or bystanders being sprayed with pesticides when it conducts risk assessments or registration decisions because it "assumes" that these exposures do not happen. Yet it is taking steps to undo one of the most meaningful safeguards against such exposures.

ED_002917_00033657-00003

We ask that you protect the health and safety of children, workers, and consumers by preserving the final Agricultural Worker Protection Standard and the Certification of Pesticide Applicators rule. We look forward to receiving your response.

Respectfully,

Tom Udall

Kamala D. Harris

Cory A. Booker

Richard Blumenthal

Dianne Feinstein

Patrick Leahy

Richard J. Durbin

Chris Van Hollen

Brian Schatz

Elizabeth Warren

ED_002917_00033657-00004

Robert Menendez

Kirsten Gillibrand

Patty Murray

Sheldon Whitehouse

Mazie K. Hirono

Edward J. Markey

Tammy Baldwin

Bernard Sanders

Michael F. Bennet

Jack Reed

Ron Wyden

Jeanne Shaheen

ED_002917_00033657-00005

Margaret Wood Hassan

Jeffrey A. Merkley

Tammy Duckworth

Martin Heinrich

Benjamin L. Cardin

Maria Cantwell

ED_002917_00033657-00006

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 18 2017

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

The Honorable Tom Udall
United States Senate
Washington, DC 20510

Dear Senator Udall:

This letter provides an update regarding issues raised in your October 20, 2017, letter to Senators Roberts and Stabenow. The Pesticide Registration Improvement Act provides significant benefits to the American people, expanding the availability of safe products to meet pest control needs and providing supplemental funding to support worker safety education programs.

As you know, in November 2015, the U.S Environmental Protection Agency issued an update to the Agricultural Worker Protection Standard. Through this revised regulation, developed through extensive stakeholder interactions, the agency is working with our state and tribal co-regulatory partners to implement stronger protections for agricultural workers, handlers and their families. Despite these efforts, in early 2017, the agency learned through discussions with the National Association of State Departments of Agriculture (NASDA), that additional materials to support implementation of these new protections were needed in order for the states to effectively and confidently implement the revised rule. In May 2017, the agency announced its intention to extend the compliance dates for implementation of the new rule. Upon further reconsideration, the agency has determined that it is not necessary to extend the compliance dates for the worker protection standard. On December 14, 2017, we released Federal Register Notices informing the public that the compliance dates in the revised WPS published on November 2, 2015 remain in effect and that the EPA does not intend to extend them.

The regulation issued in November 2015 remains in effect and the compliance dates of January 2, 2017 (for most aspects of the revised regulation) and January 2, 2018 (for all other aspects of the regulation) remain in place.

To better understand what support states need to implement the new standard, the EPA has been meeting with the state departments of agriculture and other stakeholders to identify which aspects of the rule might need clarification and, if necessary, revision. This conversation continued most recently as part of the November 2, 2017, meeting of the Pesticide Program Dialogue Committee (PPDC), a federal advisory committee providing advice to the Office of Pesticide Programs' policy and regulatory decisions. During the November 2017 meeting, the PPDC discussed three significant issues, also raised as part of the Regulatory Reform effort

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initiated by the agency in response to Executive Orders 13771 and 13777: 1) minimum age for agricultural handlers; 2) the designated representative provision; and 3) the application exclusion zone. The following summarizes feedback the EPA received from the Regulatory Reform comments and the PPDC, as well as the agency's path forward on these targeted components of the worker protection standard:

- Regarding the minimum age provision, while PPDC stakeholders advised the agency that, for the most part, they are able to implement this provision as promulgated in the regulations, there was agreement that the "family exemption" provision was not flexible enough to accommodate family-owned and operated businesses of commercial applicators. Some stakeholders at the meeting expressed an interest in letting states determine a minimum age for agricultural handlers that meets the needs of the local rural economy. Furthermore, the EPA has heard from other stakeholders that the "family exemption" is more restrictive than USDA's definition of "family." In order to maintain current practices in rural America that allow young people to contribute to all aspects of farming operations, the EPA intends to issue a proposed rule for public comment that would reconsider the worker protection standard minimum age requirements to address these stakeholder concerns.

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In addition, the agency has been working closely with stakeholders to develop training, outreach and educational materials to ensure that the agricultural community can effectively implement the revised agricultural worker protection standard. For example, through the Pesticide Educational Resources Collaborative (PERC), a cooperative agreement between the Office of Pesticide Programs and the University of California Davis Extension, in collaboration

with Oregon State University, a large collection of materials has been developed to support implementation of the revised standard. The PERC includes an advisory board to support development of outreach, educational, and pesticide safety training materials, with membership from several state departments of agriculture, cooperative extension, and the farmworker advocacy community. More information about the PERC's activities can be found at: http://pesticideresources.org.

Once any necessary changes to the regulation have been made, in response to public comment, EPA will, consistent with the final rule issued on November 2, 2015, publish in the Federal Register a notice of the availability of the pesticide safety training materials for workers and handlers. To allow time for the completion and distribution of revised training materials and to allow time for trainers to become familiar with them and begin training workers and handlers, the current rule extends the implementation period for the content of the training until six months after EPA has made the revised training materials available. Nevertheless, the requirements for notification, respirator fit testing and medical evaluation, improved decontamination supplies, minimum age, and the application exclusion zone, among other provisions, do not depend upon the above-referenced Federal Register notice in order for these provisions to go into effect. These requirements went into effect on January 2, 2017, and the remaining requirements will go into effect on January 2, 2018.

Similarly, the PPDC and Regulatory Reform comments also discussed the Certification of Pesticide Applicators rule issued in January 2017. The PPDC discussed the minimum age provision in this rule and, as with the worker protection standard, identified scenarios where the "family exemption" provision was not flexible enough to accommodate for common practices in rural communities. Stakeholders commenting under the Regulatory Reform effort highlighted the increased labor costs for pesticide application businesses nationwide, and noted that the requirement was unnecessary for individuals who pass the State certification standard to apply restricted use pesticides and follow pesticide labels, including the use of personal protective equipment. Some commenters also stated that age requirements should be the decision of the States. Additionally, the minimum age provision does not provide flexibility for other common practices in rural communities, such as the hands on agricultural education young people receive via 4-H and other organizational activities. As with the worker protection standard, the agency intends to develop a proposed rule for public comment that would reconsider the certification of pesticide applicators regulation to address stakeholder's concerns.

Regarding chlorpyrifos, the March 2017 decision to deny the petition, submitted by the Natural Resources Defense Council and the Pesticide Action Network North America, initiated the objections phase of the petition process provided under the Federal Food, Drug, and Cosmetic Act (FFDCA).[1] The FFDCA requires the EPA to respond to the objections "as soon as practicable". As discussed recently with your staff, the same individuals that support the

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The statutorily mandated re-evaluation of this insecticide continues as the agency works to meet the statutory deadline for the registration review (reevaluation) of nearly 725 pesticide active ingredients by October 1, 2022. As part of the reevaluation of chlorpyrifos, EPA's scientists are also considering the comments submitted in response to the October 30, 2015, proposed rule and the November 17, 2016, notice of data availability. During these comment periods, stakeholders raised significant issues with the scientific conclusions supporting the ongoing rulemaking. We are developing responses to the comments raised in the stakeholder feedback submitted during the rulemaking process.

The EPA has several additional milestones to complete before it will be able to finalize a registration review decision for chlorpyrifos. Two of these milestones include the publication of documents with public comment periods where stakeholders can weigh in on the agency's assessments. Meanwhile, agency scientists continue to monitor and consider the ongoing research and literature evaluating the potential human health effects for chlorpyrifos. In addition, the agency also continues to consider how best to use the available observational epidemiology data in light of the comments from the FIFRA Scientific Advisory Panel as well as comments received in response to the November 2016 Notice of Data Availability. The agency estimates this work will take approximately 18 months, or 24 months if the analysis requires peer review. The Human Health Risk Assessment will then be published for a 60-day public comment period, after which the agency will prepare a response to comments document and Proposed Interim Decision, which will also be published for public comment for 60 days. The agency will then address public comments received on the Proposed Interim Decision, and develop the Interim Decision for chlorpyrifos.

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I hope you find this information helpful as you consider a path forward for the reauthorization of PRIA. Our determination to not extend any of the compliance dates for the Worker Protection Standard is a significant change in direction. Instead, the agency will use the rulemaking process, which includes opportunity for public comment, to reconsider only a few aspects of the rule while all compliance dates continue to remain in effect.

If you have questions, please contact me or your staff may contact Sven-Erik Kaiser in the EPA's Office of Congressional and Intergovernmental Relations at kaiser.sven-erik@epa.gov or at (202) 566-2753.

Sincerely,

Charlotte Bertrand

Charlotte Bertrand
Acting Principal Deputy Assistant Administrator

Message

From: Han, Kaythi [Han.Kaythi@epa.gov]
Sent: 3/12/2018 9:58:17 PM
To: Mosby, Jackie [Mosby.Jackie@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]
CC: Herndon, George [Herndon.George@epa.gov]; Lantz, Tracy [Lantz.Tracy@epa.gov]
Subject: RE: Sen. Udall Letter on Agricultural Worker Protection Rules
Attachments: Agricultural Worker Protection Rules - to Pruitt - from Udall et al. - (....pdf; OCSPP Letter to Senator Udall 12 18 17.pdf; Udall WPS draft 3-12-18.docx

Importance: High

Jackie, Patty and Kevin,

Please review the attached draft response to Senator Udall.

I've also attached the December 18, 2017 response to Senator Udall for your reference. Do you think that letter should be included as an enclosed document for this response?

Kaythi Han
Team Leader, Communications
Office of Pesticide Programs
U.S. Environmental Protection Agency
(703) 305-5642 | han.kaythi@epa.gov

From: Mosby, Jackie
Sent: Monday, March 12, 2018 10:33 AM
To: Han, Kaythi <Han.Kaythi@epa.gov>
Cc: Siedschlag, Gregory <Siedschlag.Gregory@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Herndon, George <Herndon.George@epa.gov>
Subject: FW: Sen. Udall Letter on Agricultural Worker Protection Rules

fyi

From: Keigwin, Richard
Sent: Monday, March 12, 2018 9:43 AM
To: Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Keaney, Kevin <Keaney.Kevin@epa.gov>
Subject: FW: Sen. Udall Letter on Agricultural Worker Protection Rules

Coming our way.

From: Kaiser, Sven-Erik
Sent: Monday, March 12, 2018 9:37 AM
To: Palich, Christian <palich.christian@epa.gov>; Frye, Tony (Robert) <frye.robert@epa.gov>; Ringel, Aaron <ringel.aaron@epa.gov>; Rodrick, Christian <rodrick.christian@epa.gov>; Lyons, Troy <lyons.troy@epa.gov>; Richardson, RobinH <Richardson.RobinH@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Hanley, Mary <Hanley.Mary@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Sisco, Debby <Sisco.Debby@epa.gov>; Wise, Louise <Wise.Louise@epa.gov>; Shimmin, Kaitlyn <shimmin.kaitlyn@epa.gov>
Subject: Sen. Udall Letter on Agricultural Worker Protection Rules

Heads up on a new letter from Sen. Udall and others on pesticides WPS and C&T rules. I'll get it logged in for handling. Please let me know if any questions. Thanks,
Sven

Sven-Erik Kaiser

U.S. EPA

Office of Congressional and Intergovernmental Relations

1200 Pennsylvania Ave., NW (1305A)

Washington, DC 20460

202-566-2753 (o)

202-591-0619 (c)

From: "Black, Jonathan (Tom Udall)" <Jonathan_Black@tomudall.senate.gov>
Date: March 12, 2018 at 9:20:08 AM EDT
To: "Kaiser, Sven-Erik" <Kaiser.Sven-Erik@epa.gov>
Cc: "Zipkin, Adam (Booker)" <Adam_Zipkin@booker.senate.gov>, "Pham, Monica (Harris)" <Monica_Pham@harris.senate.gov>, "Kalonia, Maya (Blumenthal)" <Maya_Kalonia@blumenthal.senate.gov>, "Petrzelka, Joe (Feinstein)" <Joe_Petrzelka@feinstein.senate.gov>, "Black, Jonathan (Tom Udall)" <Jonathan_Black@tomudall.senate.gov>
Subject: Letter: Agricultural Worker Protection Rules - to Pruitt

Sven. Please find attached a letter to Administrator Pruitt on the agricultural worker protection rules. This letter is from Sens. Udall, Harris, Booker, Blumenthal, Feinstein & twenty-three others.

Thanks,
---Jonathan

United States Senate
WASHINGTON, DC 20510

March 12, 2018

The Honorable Scott Pruitt
Administrator
U.S Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Washington, DC 20460

Dear Mr. Administrator:

We write to express our alarm with the Environmental Protection Agency's (EPA) announcement that it seeks to open up for reconsideration two federal safeguards vital to the protection of the children, women and men that labor in agriculture and apply chemicals in agricultural, commercial and residential settings. With the lives of children and families across the country at stake, we urge you to preserve the protections provided by the final Agricultural Worker Protection Standard rule (WPS) and Certification of Pesticide Applicators rule (CPA) (as published in the Federal Register on November 2, 2015 and January 4, 2017, respectively), and to resolve any clarifications needed by the regulated community via additional guidance on the rules.

We recognize the important role that pesticides play in the United States, particularly in the agricultural sector. However, precautions must be taken to safeguard the public and the most exposed and vulnerable populations from pesticide related illness, injury and death caused by these potentially toxic chemicals. To this end, the EPA finalized revisions to the WPS in the fall of 2015, and the CPA rule in January 2017.

To understand the relevance of these two rules, we must first acknowledge the people whose lives they protect and how their training and wellbeing is inextricably linked to our health and safety. The WPS applies to workers and pesticide handlers that labor in farms, fields, nurseries, greenhouses and forests. The CPA rule governs the training and certification requirements of workers who apply Restricted Use Pesticides (RUPs) in, on, or around settings such as homes, schools, hospitals and industrial establishments. These rules protect not only the workers that handle and are exposed to pesticides, but also areas around agricultural land and the children who may incidentally come in contact with the pesticides. From our homes to children's schools and agricultural operations across the nation, these federal protections safeguard our families and weakening them undermines the health and safety of all.

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We are concerned that the EPA is unjustifiably reconsidering the minimum age protections that prohibit children from applying pesticides, the right of farmworkers to access pesticide-application information and Safety Data Sheets (SDS) through a designated representative, and protections for bystanders through "application exclusion zones," which requires that an applicator suspend pesticide application if "an unprotected/non-trained person" enters the area around the application equipment. We strongly feel that undermining these important protections cannot be justified, especially considering that the CPA rule governs the training and certification requirements for using RUPs in, on, or in residential settings, schools, hospitals, and industrial establishments.

RUPs are the most toxic pesticides on the market, and their misuse has resulted in serious harm and death. These pesticides are not available for purchase by the general public because they have "the potential to cause unreasonable adverse effects to the environment and injury to applicators or bystanders without added restrictions." RUPs can only be used by an individual that is a certified pesticide applicator or is under the direct supervision of a certified applicator. These rules were revised to prevent farmworker poisonings and in the aftermath of pesticide misuse that led to serious harm for hundreds of homeowners and their families, and resulted in the tragic deaths of children. These tragic incidents – all of which could have been prevented with stronger safeguards in place – highlight the significance of ensuring that workers who handle pesticides are adequately trained and understand the hazards posed by the chemicals that they are applying so that they can effectively protect themselves and others from occupational and take-home exposures.

Congress specifically intended for the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) to protect workers and other persons from occupational exposure directly to pesticides or to their residues. Honoring this mandate is crucial to protecting the health and safety of rural communities and the broader public since it is up to the EPA and not the Occupational Safety and Health Administration to set minimum protections from pesticide exposure. Furthermore, without the life-saving requirements provided by the WPS and CPA rules, there is little to deter the unlawful use of hazardous pesticides since FIFRA only authorizes a misdemeanor charge even when pesticide misuse results in death.

Additionally, the agency is ignoring the advice of the Pesticide Program Dialogue Committee—a broadly representative federal advisory committee—that met to discuss these rules, raised the importance of education for the regulated community while echoing consensus about the preservation of the minimum age requirements, the designated representative provision, and the application exclusion zone to protect workers and bystanders from pesticides.

To set the record straight on misleading concerns about these fundamental requirements:

- The new rules prohibit employers from requiring youth under the age of 18 from applying pesticides or performing "early-entry" work in areas where pesticides were recently applied. This is extremely important because pesticides can impact developing brains and bodies. There are currently half a million children under the age of 18 working in agriculture, including some as young as elementary school age. The minimum age requirement in both rules accounts for the needs of family-owned businesses and operators by exempting immediate family of the owner-operator of agricultural establishments, and private or commercial pesticide applicator businesses. Specifically, "immediate family" is broadly defined to include the "owner's spouse, parents, step parents, foster parents, father-in-law, mother-in-law, children, stepchildren, foster children, sons-in-law, daughters-in-law, grandparents, grandchildren, brothers, sisters, brothers-in-law, sisters-in-law, aunts, uncles, nieces, nephews, and first cousins."

- The designated representative provision is critically important because there are many reasons why a worker may be unable to access information about the chemicals that they are exposed to, including but not limited to educational and language barriers as well as immigration status, illness or injury. This commonsense safeguard has been denied to farmworkers while workers in other industries have had these protections for decades. The safety information that would be accessible by a designated representative would be non-confidential, non-proprietary information about the pesticide a worker has been exposed to. There are several examples of injured farmworkers who have been denied access to safety information after injury. These farmworkers should be able to access this information on their own or through a representative that they trust, such as a co-worker, spouse, healthcare provider, union representative, social worker, or attorney.

- The application exclusion zone merely requires the common-sense precaution that if someone is applying pesticides and sees workers or other people around the equipment, they should try to avoid spraying them by suspending the application and resuming after a non-trained and unprotected person leaves the area. EPA does not account for workers or bystanders being sprayed with pesticides when it conducts risk assessments or registration decisions because it "assumes" that these exposures do not happen. Yet it is taking steps to undo one of the most meaningful safeguards against such exposures.

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We ask that you protect the health and safety of children, workers, and consumers by preserving the final Agricultural Worker Protection Standard and the Certification of Pesticide Applicators rule. We look forward to receiving your response.

Respectfully,

Tom Udall

Kamala D. Harris

Cory A. Booker

Richard Blumenthal

Dianne Feinstein

Patrick Leahy

Richard J. Durbin

Chris Van Hollen

Brian Schatz

Elizabeth Warren

ED_002917_00033661-00004

Robert Menendez

Kirsten Gillibrand

Patty Murray

Sheldon Whitehouse

Mazie K. Hirono

Edward J. Markey

Tammy Baldwin

Bernard Sanders

Michael F. Bennet

Jack Reed

Ron Wyden

Jeanne Shaheen

ED_002917_00033661-00005

Margaret Wood Hassan

Jeffrey A. Merkley

Tammy Duckworth

Martin Heinrich

Benjamin L. Cardin

Maria Cantwell

ED_002917_00033661-00006

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 18 2017

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

The Honorable Tom Udall
United States Senate
Washington, DC 20510

Dear Senator Udall:

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If you have questions, please contact me or your staff may contact Sven-Erik Kaiser in the EPA's Office of Congressional and Intergovernmental Relations at kaiser.sven-erik@epa.gov or at (202) 566-2753.

Sincerely,

Charlotte Bertrand

Charlotte Bertrand
Acting Principal Deputy Assistant Administrator

Message

From: Jones, Danielle Y. EOP/OMB [Danielle_Y_Jones@omb.eop.gov]
Sent: 7/3/2019 2:06:22 PM
To: Manibusan, Mary [Manibusan.Mary@epa.gov]
CC: Adams, Darryl [Adams.Darryl@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]
Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Mary,

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle Y. Jones
(202) 395-1741

From: Manibusan, Mary <Manibusan.Mary@epa.gov>
Sent: Tuesday, July 2, 2019 4:34 PM
To: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Danielle,

Enclosed is a non-significant request for the NPRM, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements". If you have further questions, please let me know.

Thank you so much for this consideration!

Best,
Mary

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Manibusan, Mary [Manibusan.Mary@epa.gov]
Sent: 7/3/2019 2:20:49 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]
Subject: Fwd: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Please send me the redline versions.

Thanks!

Sent from my iPhone

Begin forwarded message:

From: "Jones, Danielle Y. EOP/OMB" <Danielle_Y_Jones@omb.eop.gov>
Date: July 3, 2019 at 10:06:22 AM EDT
To: "Manibusan, Mary" <Manibusan.Mary@epa.gov>
Cc: "Adams, Darryl" <Adams.Darryl@epa.gov>, "Hofmann, Angela" <Hofmann.Angela@epa.gov>, "Smith, Peterj" <Smith.Peterj@epa.gov>
Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Mary,

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle Y. Jones
(202) 395-1741

From: Manibusan, Mary <Manibusan.Mary@epa.gov>
Sent: Tuesday, July 2, 2019 4:34 PM
To: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Danielle,

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Thank you so much for this consideration!

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Mary

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: /O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=44408BF728CD4EB5B81D295816B0C8F1-AHOFMANN [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=44408BF728CD4EB5B81D295816B0C8F1-AHOFMANN]
Sent: 7/2/2019 8:16:40 PM
To: Manibusan, Mary [manibusan.mary@epa.gov]; Nurse, Leanne [Nurse.Leanne@epa.gov]
CC: Chun, Melissa [Chun.Melissa@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]; Nickerson, William [Nickerson.William@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Kadeli, Lek [Kadeli.Lek@epa.gov]; Layne, Arnold [Layne.Arnold@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]
Subject: SAN 6331.1: OMB Determination Request for Revised AEZ/WPS NPRM - Per Request
Attachments: EO-Determination1-pager_Generated from ADP Tracker_AEZ-Revised-NPRM.docx

Hi Mary,

Ex. 5 Deliberative Process (DP)

- Angela

Angela Hofmann
Director of Regulatory and Information Coordination
Office of Program Management and Operations
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency (EPA)

Mailing Address: Mailcode 7101M - 1200 Pennsylvania Ave., N.W., Washington, DC 20460
Office Location: William Jefferson Clinton Building, East Room 3139L
Phone: 202-564-0258

Message

From: Jones, Danielle Y. EOP/OMB [Danielle_Y_Jones@omb.eop.gov]
Sent: 7/3/2019 3:21:39 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]
CC: Adams, Darryl [Adams.Darryl@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]; Chun, Melissa [Chun.Melissa@epa.gov]; Manibusan, Mary [Manibusan.Mary@epa.gov]; Nurse, Leanne [Nurse.Leanne@epa.gov]; Gilbreath, Jan [Gilbreath.Jan@epa.gov]
Subject: Re: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Great. Thanks so much!

Sent from my iPhone

On Jul 3, 2019, at 10:58 AM, Hofmann, Angela <Hofmann.Angela@epa.gov> wrote:

> Sorry Danielle, I meant to send the redlines to you after our discussion yesterday. Let us know if you have any questions. Thanks.
> - Angela
>
> Angela Hofmann
> 202-564-0258

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Wednesday, July 03, 2019 10:06 AM
To: Manibusan, Mary <Manibusan.Mary@epa.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>
Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Mary,

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle Y. Jones
(202) 395-1741

From: Manibusan, Mary <Manibusan.Mary@epa.gov>
Sent: Tuesday, July 2, 2019 4:34 PM
To: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Danielle,

Enclosed is a non-significant request for the NPRM, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements". If you have further questions, please let me know.

Thank you so much for this consideration!

Best,
Mary

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Manibusan, Mary [Manibusan.Mary@epa.gov]
Sent: 7/3/2019 3:04:31 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]
CC: Smith, Peterj [Smith.Peterj@epa.gov]
Subject: Re: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Thanks! OP typically handles all the correspondences regarding non significant determinations. Thanks for ccing us.

Sent from my iPhone

On Jul 3, 2019, at 10:58 AM, Hofmann, Angela <Hofmann.Angela@epa.gov> wrote:

> Oops. I replied to DJ's message. I copied you and the other OP leads for OCSPP, which is what we usually do.
>
> **From:** Manibusan, Mary
> **Sent:** Wednesday, July 03, 2019 10:21 AM
> **To:** Hofmann, Angela <Hofmann.Angela@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>
> **Subject:** Fwd: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM
>
> Please send me the redline versions.
>
> Thanks!
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** "Jones, Danielle Y. EOP/OMB" <Danielle_Y_Jones@omb.eop.gov>
> > **Date:** July 3, 2019 at 10:06:22 AM EDT
> > **To:** "Manibusan, Mary" <Manibusan.Mary@epa.gov>
> > **Cc:** "Adams, Darryl" <Adams.Darryl@epa.gov>, "Hofmann, Angela" <Hofmann.Angela@epa.gov>, "Smith, Peterj" <Smith.Peterj@epa.gov>
> > **Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM**
> >
> > Hi Mary,
> >
> > **Ex. 5 Deliberative Process (DP)**
> >
> > Thanks,
> > Danielle Y. Jones
> > (202) 395-1741

From: Manibusan, Mary <Manibusan.Mary@epa.gov>
Sent: Tuesday, July 2, 2019 4:34 PM
To: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Danielle,

Enclosed is a non-significant request for the NPRM, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements". If you have further questions, please let me know.

Thank you so much for this consideration!

Best,
Mary

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 8/9/2019 11:23:39 AM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]
CC: Chun, Melissa [Chun.Melissa@epa.gov]; Richmond, Jonah [Richmond.Jonah@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]
Subject: WPS/AEZ Update - FIFRA SAP Declines to Waive Review
Attachments: 2018-07-20 Letter to FIFRA SAP.pdf; 2019-06-10 Letter to FIFRA SAP.pdf; A couple of questions.pdf; D=EPA-HQ-OPP-2017-0693-003.pdf; FIFRA Review Letter_AgWPS-AEZ NPRM_OPP to SAP_2019-07-31.pdf; FIFRA Review_AgWPS-AEZ_DraftNPRM_2019-07-10.pdf; Response from Chair 20190808.pdf; Waiver Request to OPP 20190808.pdf

---

From: Yarger, Ryne <Yarger.Ryne@epa.gov>
Sent: Thursday, August 08, 2019 4:01 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Subject: FW: Request for FIFRA SAP waiver of EPA's proposed rule, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)."

FYI

From: Knott, Steven <Knott.Steven@epa.gov>
Sent: Thursday, August 08, 2019 3:44 PM
To: Yarger, Ryne <Yarger.Ryne@epa.gov>
Cc: Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hughes, Hayley <hughes.hayley@epa.gov>; Schroeder, Carolyn <Schroeder.Carolyn@epa.gov>; Herndon, George <Herndon.George@epa.gov>
Subject: Re: Request for FIFRA SAP waiver of EPA's proposed rule, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)."

Ryne,

Ex. 5 Deliberative Process (DP)

Steve

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 2/8/2019 1:32:17 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]
Subject: draft EPA responses to OMB/interagency comments went to OP
Attachments: OMB Comments on WPS NPRM_Response_DRAFT Revised 2.7.19.docx

Hi –
I'm not sure how much information you are getting on your end. I assume you know this, but then again....

I'm attaching the document to which he refers. Just FYI -

From: Keigwin, Richard
Sent: Thursday, February 07, 2019 8:20 PM
To: Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>
Cc: Overstreet, Anne <overstreet.anne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Berwald, Derek <Berwald.Derek@epa.gov>
Subject: RE: NOTE ON DRAFT WPS AEZ NPRM

Ex. 5 Deliberative Process (DP)

From: Kasai, Jeanne
Sent: Thursday, February 07, 2019 3:43 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>
Cc: Overstreet, Anne <overstreet.anne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Berwald, Derek <Berwald.Derek@epa.gov>
Subject: NOTE ON DRAFT WPS AEZ NPRM

Hi –

Ex. 5 Deliberative Process (DP)

Thanks -

From: Kasai, Jeanne
Sent: Thursday, February 07, 2019 3:01 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>
Cc: Overstreet, Anne <overstreet.anne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Berwald, Derek <Berwald.Derek@epa.gov>
Subject: DRAFT WPS AEZ NPRM

Hi Rick –

Anne Overstreet is okay with this and asked me to send it to you.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks!
Jeanne

Jeanne Kasai, USEPA
Office of Pesticide Programs, Certification & Worker Protection Branch
tel. 703-308-3240, kasai.jeanne@epa.gov
http://www.epa.gov/pesticide-worker-safety

United States
Environmental Protection
Agency

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 2/8/2019 12:37:30 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: AEZ - what went to OD yesterday afternoon
Attachments: Draft AgWPS-Revision_NPRM_FRdocument_AEZ 2.7.19.docx; DRAFT Track Changes_AgWPS-Revision_NPRM_FRdocument_AEZ 2.7.19.docx; Cost Analysis AEZ 2019 02 07.docx; OMB Comments on WPS NPRM_Response_DRAFT Revised 2.7.19.docx

Ex. 5 Deliberative Process (DP)

From: Kasai, Jeanne
Sent: Thursday, February 07, 2019 3:48 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Subject: FW: NOTE ON DRAFT WPS AEZ NPRM

From: Kasai, Jeanne
Sent: Thursday, February 07, 2019 3:43 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>
Cc: Overstreet, Anne <overstreet.anne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Berwald, Derek <Berwald.Derek@epa.gov>
Subject: NOTE ON DRAFT WPS AEZ NPRM

Hi –

Ex. 5 Deliberative Process (DP)

Thanks -

From: Kasai, Jeanne
Sent: Thursday, February 07, 2019 3:01 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward

<Messina.Edward@epa.gov>
Cc: Overstreet, Anne <overstreet.anne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Berwald, Derek <Berwald.Derek@epa.gov>
Subject: DRAFT WPS AEZ NPRM

Hi Rick –

Anne Overstreet is okay with this and asked me to send it to you.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Jeanne

Jeanne Kasai, USEPA
Office of Pesticide Programs, Certification & Worker Protection Branch
tel. 703-308-3240, kasai.jeanne@epa.gov
http://www.epa.gov/pesticide-worker-safety
United States Environmental Protection Agency

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 2/6/2019 10:37:53 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]
CC: Yarger, Ryne [Yarger.Ryne@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]; Overstreet, Anne [overstreet.anne@epa.gov]
Subject: THANKS ANGELA! END OF MESSAGE.....FW: Peter need your help
Attachments: 2.6.19 12.30 pm Draft CLEAN_AgWPS Revision_NPRM_FRdocument_AEZ_afh-523p.DOCX

Importance: High

Thanks, Angela!

From: Hofmann, Angela
Sent: Wednesday, February 06, 2019 5:29 PM
To: Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>
Cc: Overstreet, Anne <overstreet.anne@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>
Subject: RE: Peter need your help
Importance: High

Ex. 5 Deliberative Process (DP)

- Angela

From: Smith, Peterj
Sent: Wednesday, February 06, 2019 1:01 PM
To: Kasai, Jeanne <Kasai.Jeanne@epa.gov>
Cc: Yarger, Ryne <Yarger.Ryne@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: RE: Peter need your help

Hi Jeanne,

Ex. 5 Deliberative Process (DP)

****
NOTICE: *If this electronic communication explains, justifies, or documents an official action or decision, it may be subject to federal records requirements. Federal employees should evaluate the contents of this message before deleting it.*
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Kasai, Jeanne
Sent: Wednesday, February 06, 2019 12:53 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Yarger, Ryne <Yarger.Ryne@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: Peter need your help

Hi Peter –

Ex. 5 Deliberative Process (DP)

Could you help us?
Ryne will be the point person because I'm leading a conference calls starting at 1 p.m

He is at home today:

Ex. 6 Personal Privacy (PP)
Work 703 605 1193

Thanks!

From: Kasai, Jeanne
Sent: Wednesday, February 06, 2019 12:33 PM
To: Overstreet, Anne <overstreet.anne@epa.gov>
Subject: AEZ documents

Anne-
These incorporate Ryne's changes as of 9:45 am, and Rick, Winnie, Scott, and Patty's comments.

Ex. 5 Deliberative Process (DP)

Jeanne Kasai, USEPA
Office of Pesticide Programs, Certification & Worker Protection Branch
tel. 703-308-3240, kasai.jeanne@epa.gov
http://www.epa.gov/pesticide-worker-safety
EPA United States Environmental Protection Agency

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 2/6/2019 6:01:24 PM
To: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
CC: Yarger, Ryne [Yarger.Ryne@epa.gov]; Overstreet, Anne [overstreet.anne@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: RE: Peter need your help
Attachments: Cost Analysis AEZ 2019 02 06.docx; 2.6.19 12.20 pm DRAFT TRACK CHANGES_ AgWPS-Revision_NPRM_FRdocument_AEZ.DOCX; 2.6.19 12.30 pm Draft CLEAN_AgWPS Revision_NPRM_FRdocument_AEZ.DOCX

Hi Jeanne,

Ex. 5 Deliberative Process (DP)

****
NOTICE: *If this electronic communication explains, justifies, or documents an official action or decision, it may be subject to federal records requirements. Federal employees should evaluate the contents of this message before deleting it.*
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Kasai, Jeanne
Sent: Wednesday, February 06, 2019 12:53 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Yarger, Ryne <Yarger.Ryne@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: Peter need your help

Hi Peter –

Ex. 5 Deliberative Process (DP)

Could you help us?
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Ex. 6 Personal Privacy (PP)
Work 703 605 1193

Thanks!

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Sent: Wednesday, February 06, 2019 12:33 PM
To: Overstreet, Anne <overstreet.anne@epa.gov>
Subject: AEZ documents

Anne-
These incorporate Ryne's changes as of 9:45 am, and Rick, Winnie, Scott, and Patty's comments.

Ex. 5 Deliberative Process (DP)

Jeanne Kasai, USEPA
Office of Pesticide Programs, Certification & Worker Protection Branch
tel. 703-308-3240, kasai.jeanne@epa.gov
http://www.epa.gov/pesticide-worker-safety
United States Environmental Protection Agency

Message

From: Yarger, Ryne [Yarger.Ryne@epa.gov]
Sent: 7/1/2019 7:59:56 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: PRIA 4 Language regarding AEZ

Ex. 5 Deliberative Process (DP)

SEC. 7. AGRICULTURAL WORKER PROTECTION STANDARD; CERTIFICATION OF PESTICIDE APPLICATORS.

(a) IN GENERAL.—Except as provided in subsection (b), during the period beginning on the date of enactment of this Act and ending not earlier than October 1, 2021, the Administrator of the Environmental Protection Agency (referred to in this section as the ''Administrator'')—

(1) shall carry out—

(A) the final rule of the Administrator entitled ''Pesticides; Agricultural Worker Protection Standard Revisions'' (80 Fed. Reg. 67496 (November 2, 2015)); and

(B) the final rule of the Administrator entitled ''Pesticides; Certification of Pesticide Applicators'' (82 Fed. Reg. 952 (January 4, 2017)); and

(2) shall not revise or develop revisions to the rules described in subparagraphs (A) and (B) of paragraph (1).

(b) EXCEPTIONS.—Prior to October 1, 2021, the Administrator may propose, and after a notice and public comment period of not less than 90 days, promulgate revisions to the final rule described in subsection (a)(1)(A) addressing **application exclusion zones** under part 170 of title 40, Code of Federal Regulations, S. 483—96 consistent with the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.).

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 6/19/2019 3:53:27 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: FW: EPA RESPONSE: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Attachments: MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-06-11.docx

Ex. 5 Deliberative Process (DP)

From: Smith, Peterj
Sent: Tuesday, June 11, 2019 5:06 PM
To: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Cc: Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: EPA RESPONSE: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Danielle,

I am pleased to attach an revised NPRM markup reflecting edits made in response to the USDA comments received late this morning, along with responses to the USDA comments. We are confident that we have satisfactorily addressed USDA's comments and are hopeful that we will be able to conclude review tomorrow.

Best,
Peter

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, June 11, 2019 11:08 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Peter,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 6/11/2019 9:06:15 PM
To: Jones, Danielle Y. EOP/OMB [Danielle_Y_Jones@omb.eop.gov]
CC: Gilbreath, Jan [Gilbreath.Jan@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: EPA RESPONSE: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Attachments: EPA RESPONSE_USDA-Comments_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_2019-06-11.docx; MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-06-11.docx

Hi Danielle,

I am pleased to attach an revised NPRM markup reflecting edits made in response to the USDA comments received late this morning, along with responses to the USDA comments. We are confident that we have satisfactorily addressed USDA's comments and are hopeful that we will be able to conclude review tomorrow.

Best,
Peter

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, June 11, 2019 11:08 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Peter,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 6/11/2019 3:24:12 PM
To: Smith, Peterj [Smith.Peterj@epa.gov]; Lantz, Tracy [Lantz.Tracy@epa.gov]; Lloyd, Matthew [Lloyd.Matthew@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Garrison, Scott [Garrison.Scott@epa.gov]; Gilbreath, Jan [Gilbreath.Jan@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: RE: USDA COMMENTS: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Attachments: USDA COMMENTS: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Peter –

We will make all changes and send it back. No need for a conference call.

Thanks-
Jeanne

From: Smith, Peterj
Sent: Tuesday, June 11, 2019 11:11 AM
To: Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>; Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Park, Jennifer <park.jennifer@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>; Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>; Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: USDA COMMENTS: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Importance: High

Just received via OMB.

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, June 11, 2019 11:08 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Peter,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 6/11/2019 3:10:37 PM
To: Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Lantz, Tracy [Lantz.Tracy@epa.gov]; Lloyd, Matthew [Lloyd.Matthew@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Garrison, Scott [Garrison.Scott@epa.gov]; Gilbreath, Jan [Gilbreath.Jan@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: USDA COMMENTS: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Attachments: MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-06-03-tfc.docx

Importance: High

Just received via OMB.

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, June 11, 2019 11:08 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Peter,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 6/11/2019 3:10:37 PM
To: Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Lantz, Tracy [Lantz.Tracy@epa.gov]; Lloyd, Matthew [Lloyd.Matthew@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Garrison, Scott [Garrison.Scott@epa.gov]; Gilbreath, Jan [Gilbreath.Jan@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: USDA COMMENTS: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Attachments: MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-06-03-tfc.docx

Importance: High

Just received via OMB.

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, June 11, 2019 11:08 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Peter,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Jones, Danielle Y. EOP/OMB [Danielle_Y_Jones@omb.eop.gov]
Sent: 6/11/2019 3:07:52 PM
To: Smith, Peterj [Smith.Peterj@epa.gov]
CC: Gilbreath, Jan [Gilbreath.Jan@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Attachments: MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-06-03-tfc.docx

Hi Peter,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 6/3/2019 3:50:21 PM
To: Jones, Danielle Y. EOP/OMB [Danielle_Y_Jones@omb.eop.gov]
CC: Hofmann, Angela [Hofmann.Angela@epa.gov]; DeBruhl, Brandon F. EOP/OMB [Brandon_F_DeBruhl@omb.eop.gov]; Gilbreath, Jan [Gilbreath.Jan@epa.gov]
Subject: EPA MARKUP: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Attachments: MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-06-03.docx

Hi Danielle

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
NOTICE: *If this electronic communication explains, justifies, or documents an official action or decision, it may be subject to federal records requirements. Federal employees should evaluate the contents of this message before deleting it.*
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Friday, May 24, 2019 9:40 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Hofmann, Angela <Hofmann.Angela@epa.gov>; DeBruhl, Brandon F. EOP/OMB <Brandon_F_DeBruhl@omb.eop.gov>; Gilbreath, Jan <Gilbreath.Jan@epa.gov>
Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Peter,

Please see the attachment with recommended edits and comments from CDC for EPA's consideration. If EPA would like to schedule a meeting with CDC for next week, please work with my colleague Brandon De Bruhl to schedule. I have cc him on this email.

Best,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Suzuki, Judy [Suzuki.Judy@epa.gov]
Sent: 11/2/2015 9:45:03 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]; Richmond, Jonah [Richmond.Jonah@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]
CC: Clark, Spencer [Clark.Spencer@epa.gov]
Subject: ICR 2491.02 submitted to OMB
Attachments: 2491ss02.docx

Hello,

ICR 2491.02, 2070-0190, "Agricultural Worker Protection Standard Training, Notification and Recordkeeping (Final Rule)," was submitted to OMB on 11/2/2015.

Thank you,
Judy Suzuki
EPA ICR Desk Officer
202.566.0783

Message

From: Hofmann, Angela [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=44408BF728CD4EB5B81D295816B0C8F1-AHOFMANN]
Sent: 7/3/2019 2:58:41 PM
To: Manibusan, Mary [manibusan.mary@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]
Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Oops. I replied to DJ's message. I copied you and the other OP leads for OCSPP, which is what we usually do.

From: Manibusan, Mary
Sent: Wednesday, July 03, 2019 10:21 AM
To: Hofmann, Angela <Hofmann.Angela@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>
Subject: Fwd: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Please send me the redline versions.

Thanks!

Sent from my iPhone

Begin forwarded message:

> **From:** "Jones, Danielle Y. EOP/OMB" <Danielle_Y_Jones@omb.eop.gov>
> **Date:** July 3, 2019 at 10:06:22 AM EDT
> **To:** "Manibusan, Mary" <Manibusan.Mary@epa.gov>
> **Cc:** "Adams, Darryl" <Adams.Darryl@epa.gov>, "Hofmann, Angela" <Hofmann.Angela@epa.gov>, "Smith, Peterj" <Smith.Peterj@epa.gov>
> **Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM**
>
> Hi Mary,
>
> **Ex. 5 Deliberative Process (DP)**
>
> Thanks,
> Danielle Y. Jones
> (202) 395-1741
>
> ---
>
> **From:** Manibusan, Mary <Manibusan.Mary@epa.gov>
> **Sent:** Tuesday, July 2, 2019 4:34 PM
> **To:** Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
> **Cc:** Adams, Darryl <Adams.Darryl@epa.gov>
> **Subject:** Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM
>
> Hi Danielle,

Enclosed is a non-significant request for the NPRM, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements". If you have further questions, please let me know.

Thank you so much for this consideration!

Best,
Mary

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Hofmann, Angela [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=44408BF728CD4EB5B81D295816B0C8F1-AHOFMANN]
Sent: 7/3/2019 2:57:50 PM
To: 'Jones, Danielle Y. EOP/OMB' [Danielle_Y_Jones@omb.eop.gov]
CC: Adams, Darryl [Adams.Darryl@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]; Chun, Melissa [Chun.Melissa@epa.gov]; Manibusan, Mary [manibusan.mary@epa.gov]; Nurse, Leanne [Nurse.Leanne@epa.gov]; Gilbreath, Jan [Gilbreath.Jan@epa.gov]
Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM
Attachments: MARKUP_AgWPS-AEZOnly_DraftNPRM_2019-06-19.docx; MARKUP_AgWPS-AEZ-ONLY_DraftNPRM_CostAnalysis_2019-06-19.docx

Sorry Danielle, I meant to send the redlines to you after our discussion yesterday. Let us know if you have any questions. Thanks.
- Angela

Angela Hofmann
202-564-0258

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Wednesday, July 03, 2019 10:06 AM
To: Manibusan, Mary <Manibusan.Mary@epa.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>
Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Mary,

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle Y. Jones
(202) 395-1741

From: Manibusan, Mary <Manibusan.Mary@epa.gov>
Sent: Tuesday, July 2, 2019 4:34 PM
To: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Danielle,

Enclosed is a non-significant request for the NPRM, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements". If you have further questions, please let me know.

Thank you so much for this consideration!

Best,
Mary

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Layne, Arnold [Layne.Arnold@epa.gov]
Sent: 2/13/2019 1:14:48 PM
To: Hofmann, Angela [Hofmann.Angela@epa.gov]; Berkley, Bruce [Berkley.Bruce@epa.gov]; Chun, Melissa [Chun.Melissa@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]
Subject: FW: Revised Drafts of the AEZ Proposed Rule and Cost Analysis
Attachments: Cost Analysis AEZ 2019 02 11.docx; Cost Analysis AEZ 02.06.wfm. IO 2.11.19.pdf; Clean WPS NPRM FRNotice AEZ 2.12.19 v2.docx; 2.12.19v2 DRAFT Track Changes_AgWPS-Revision_NPRM_FRdocument_AEZ_.docx; 2.6.19 AgWPS Revision RPK. IO 2.12.19.pdf

Importance: High

Arnold E. Layne
Acting Associate Assistant Administrator
OCSPP WJC East 3139A
202-564-0758

"Our prime purpose in life is to help people. And if we cannot help them, at the very least don't hurt them!" Anonymous
"Nobody cares how much you know, until they know you care about them!" Zig Ziglar

---

From: Keigwin, Richard
Sent: Wednesday, February 13, 2019 7:22 AM
To: Dunn, Alexandra <dunn.alexandra@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
Cc: Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Layne, Arnold <Layne.Arnold@epa.gov>
Subject: Revised Drafts of the AEZ Proposed Rule and Cost Analysis
Importance: High

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 2/12/2019 5:28:44 PM
To: Smith, Peterj [Smith.Peterj@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: FYI - here is the latest.....FW: 2/12/19 Updates to NPRM/Cost Analysis - WPS AEZ -
Attachments: 2.6.19 AgWPS Revision RPK. IO 2.11.19.pdf; 2.12.19JK DRAFT Track Changes_AgWPS-Revision_NPRM_FRdocument_AEZ .docx; Cost Analysis AEZ 2019 02 11.docx; Cost Analysis AEZ 02.06.wfm. IO 2.11.19.pdf; Clean WPS NPRM FRNotice AEZ 2.12.19.docx

Importance: High

Hi –
This has just gone to Rick. Just FYI -

From: Overstreet, Anne
Sent: Tuesday, February 12, 2019 12:03 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>
Cc: Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>
Subject: 2/12/19 Updates to NPRM/Cost Analysis - WPS AEZ -
Importance: High

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Anne Overstreet, Chief
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs (7510P)
U.S. Environmental Protection Agency
(703) 308-8068
Overstreet.anne@epa.gov
http://www.epa.gov/pesticides

From: Keigwin, Richard
Sent: Tuesday, February 12, 2019 5:19 AM
To: Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Cc: Messina, Edward <Messina.Edward@epa.gov>
Subject: Fwd: Current Draft Revisions to WPS Rule

Before 3pm today, please give us an ETA on revisions to the draft rule and cost savings document. Albeit based upon a quick look at the comments, it would seem that we could turn around revisions today.

Rick Keigwin
Director, Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: 703-305-7090
Website: www.epa.gov/pesticides
Sent from my iPhone

Begin forwarded message:

> **From:** "Keller, Kaitlin" <keller.kaitlin@epa.gov>
> **To:** "Keigwin, Richard" <Keigwin.Richard@epa.gov>
> **Cc:** "Messina, Edward" <Messina.Edward@epa.gov>, "Miller, Wynne" <Miller.Wynne@epa.gov>, "Mosby, Jackie" <Mosby.Jackie@epa.gov>, "Hofmann, Angela" <Hofmann.Angela@epa.gov>, "Tyree, JamesN" <tyree.jamesn@epa.gov>, "Layne, Arnold" <Layne.Arnold@epa.gov>
> **Subject: RE: Current Draft Revisions to WPS Rule**
>
> All,
>
> Charlotte and Nancy's comments are combined in the attached hard copy draft. No comments from Erik. Alex is finishing her review possibly this afternoon. Will send those comments when I have them.
> Thanks,
> Kaitlin

From: Keigwin, Richard
Sent: Wednesday, February 06, 2019 7:30 PM
To: Dunn, Alexandra <dunn.alexandra@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
Cc: Keller, Kaitlin <keller.kaitlin@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Layne, Arnold <Layne.Arnold@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: Current Draft Revisions to WPS Rule

Ex. 5 Deliberative Process (DP)

Rick Keigwin
Director, Office of Pesticide Programs
US Environmental Protection Agency
Phone: 703-305-7090
Email: keigwin.richard@epa.gov
Visit: https://www.epa.gov/pesticides

Message

From: Keller, Kaitlin [keller.kaitlin@epa.gov]
Sent: 2/11/2019 7:24:55 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]
CC: Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]; Tyree, JamesN [tyree.jamesn@epa.gov]; Layne, Arnold [Layne.Arnold@epa.gov]
Subject: RE: Current Draft Revisions to WPS Rule
Attachments: Cost Analysis AEZ 02.06.wfm. IO 2.11.19.pdf; 2.6.19 AgWPS Revision RPK. IO 2.11.19.pdf

All,

Charlotte and Nancy's comments are combined in the attached hard copy draft. No comments from Erik. Alex is finishing her review possibly this afternoon. Will send those comments when I have them.

Thanks,
Kaitlin

From: Keigwin, Richard
Sent: Wednesday, February 06, 2019 7:30 PM
To: Dunn, Alexandra <dunn.alexandra@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
Cc: Keller, Kaitlin <keller.kaitlin@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Layne, Arnold <Layne.Arnold@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: Current Draft Revisions to WPS Rule

Ex. 5 Deliberative Process (DP)

Rick Keigwin
Director, Office of Pesticide Programs
US Environmental Protection Agency
Phone: 703-305-7090
Email: keigwin.richard@epa.gov
Visit: https://www.epa.gov/pesticides

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 2/12/2019 8:06:05 PM
To: Smith, Peterj [Smith.Peterj@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]
Subject: fyi only - just so you have access to the latest
Attachments: Cost Analysis AEZ 2019 02 11.docx; Cost Analysis AEZ 02.06.wfm. IO 2.11.19.pdf; Clean WPS NPRM FRNotice AEZ 2.12.19 v2.docx; 2.12.19v2 DRAFT Track Changes_AgWPS-Revision_NPRM_FRdocument_AEZ_.docx; 2.6.19 AgWPS Revision RPK. IO 2.12.19.pdf

Importance: High

From: Kasai, Jeanne
Sent: Tuesday, February 12, 2019 2:56 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>
Cc: Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>
Subject: Edit made: here are WPS AEZ documents ready to go
Importance: High

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Anne Overstreet, Chief
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs (7510P)
U.S. Environmental Protection Agency
(703) 308-8068
Overstreet.anne@epa.gov
http://www.epa.gov/pesticides

From: Keigwin, Richard
Sent: Tuesday, February 12, 2019 5:19 AM
To: Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Cc: Messina, Edward <Messina.Edward@epa.gov>
Subject: Fwd: Current Draft Revisions to WPS Rule

Before 3pm today, please give us an ETA on revisions to the draft rule and cost savings document. Albeit based upon a quick look at the comments, it would seem that we could turn around revisions today.

Rick Keigwin
Director, Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: 703-305-7090
Website: www.epa.gov/pesticides
Sent from my iPhone

Begin forwarded message:

> **From:** "Keller, Kaitlin" <keller.kaitlin@epa.gov>
> **To:** "Keigwin, Richard" <Keigwin.Richard@epa.gov>
> **Cc:** "Messina, Edward" <Messina.Edward@epa.gov>, "Miller, Wynne" <Miller.Wynne@epa.gov>, "Mosby, Jackie" <Mosby.Jackie@epa.gov>, "Hofmann, Angela" <Hofmann.Angela@epa.gov>, "Tyree, JamesN" <tyree.jamesn@epa.gov>, "Layne, Arnold" <Layne.Arnold@epa.gov>
> **Subject: RE: Current Draft Revisions to WPS Rule**
>
> All,
>
> Charlotte and Nancy's comments are combined in the attached hard copy draft. No comments from Erik. Alex is finishing her review possibly this afternoon. Will send those comments when I have them.
> Thanks,
> Kaitlin
>
> **From:** Keigwin, Richard
> **Sent:** Wednesday, February 06, 2019 7:30 PM
> **To:** Dunn, Alexandra <dunn.alexandra@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
> **Cc:** Keller, Kaitlin <keller.kaitlin@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller,

Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Layne, Arnold <Layne.Arnold@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: Current Draft Revisions to WPS Rule

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Rick Keigwin
Director, Office of Pesticide Programs
US Environmental Protection Agency
Phone: 703-305-7090
Email: keigwin.richard@epa.gov
Visit: https://www.epa.gov/pesticides

Appointment

From: Dunn, Alexandra [dunn.alexandra@epa.gov]
Sent: 4/9/2019 2:24:10 PM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]; Altieri, Sonia [Altieri.Sonia@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Bennett, Tate [Bennett.Tate@epa.gov]; Schwab, Justin [Schwab.Justin@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Messina, Edward [Messina.Edward@epa.gov]; Mills, William T. [mills.williamt@epa.gov]; Lis-Coghlan, Kamila [lis-coghlan.kamila@epa.gov]

Subject: FW: Meeting w/ Farmworker Justice
Attachments: EXTERNAL MEETING REQUEST - FJ Earthjustice.docx
Location: 3156 WJC EAST

Start: 4/12/2019 8:00:00 PM
End: 4/12/2019 8:45:00 PM
Show Time As: Busy

-----Original Appointment-----
From: Dunn, Alexandra
Sent: Tuesday, April 09, 2019 9:50 AM
To: Dunn, Alexandra; Altieri, Sonia; Keller, Kaitlin; Keigwin, Richard; Bennett, Tate; Schwab, Justin; Beck, Nancy; Baptist, Erik
Subject: Meeting w/ Farmworker Justice
When: Friday, April 12, 2019 4:00 PM-4:45 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 3156 WJC EAST

EXTERNAL MEETING REQ...

EXTERNAL MEETING REQUEST

Meeting Title:	Environmental Justice Concerns for Farmworker Communities	**Meeting Time/Date(s):**	4/12/19, 4 pm
Meeting Location:	1201 Constitution Ave. NW.	**Point of Contact:**	Virginia Ruiz

Purpose: Informational

Key Attendees:

Virginia Ruiz, Director of Occupational and Environmental Health, Farmworker Justice

Iris Figueroa, Staff Attorney, Farmworker Justice

Andrea Delgado, Healthy Communities Legislative Director, Earthjustice

Eve Gartner, Staff Attorney, Earthjustice

Discussion Topics:

Agricultural Worker Protection Standard / Certification of Pesticide Applicator Rule

- Implementation and enforcement
- Rulemaking – Application Exclusion Zones

Potential site visit to a farmworker community

Other Important Information:

Attachments:

Message

From: Vizard, Elizabeth [Vizard.Elizabeth@epa.gov]
Sent: 8/31/2016 10:24:51 PM
To: Messina, Edward [Messina.Edward@epa.gov]; Lott, Don [Lott.Don@epa.gov]; Sullivan, Greg [Sullivan.Greg@epa.gov]
Subject: RE: In case you haven't seen this. FW: AAPCO Letter
Attachments: Letter to Jack Housenger.pdf; Regional Division Directors Meeting NYC - WP.DOCX

Don and Greg-

Ex. 5 Deliberative Process (DP)

Elizabeth Vizard, Chief
Pesticide, Waste & Toxics Branch
Monitoring, Assistance & Media Programs Division
Office of Compliance
202-564-5940

From: Mosby, Jackie
Sent: Wednesday, August 31, 2016 2:31 PM
To: Messina, Edward <Messina.Edward@epa.gov>; Vizard, Elizabeth <Vizard.Elizabeth@epa.gov>; Lott, Don <Lott.Don@epa.gov>; Sullivan, Greg <Sullivan.Greg@epa.gov>
Cc: Keaney, Kevin <Keaney.Kevin@epa.gov>
Subject: FW: In case you haven't seen this ..... FW: AAPCO Letter

FYI, Letter from AAPCO and in it they discuss compliance with WPS. Regards, Jackie

Jacqueline E. Mosby, MPH
Director, Field & External Affairs Division
Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: 703-308-2226, Ex. 6 Personal Privacy (PP) Fax: 703-305-6244
1200 Pennsylvania Avenue, N.W.
Mailstop: 7506P
Washington, DC 20460
Mosby.jackie@epa.gov

From: Keaney, Kevin
Sent: Wednesday, August 31, 2016 1:03 PM
To: Mosby, Jackie <Mosby.Jackie@epa.gov>; Schroeder, Carolyn <Schroeder.Carolyn@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Park, Jennifer <park.jennifer@epa.gov>; Berliner, Joshua <berliner.joshua@epa.gov>; Davis, Kathy <Davis.Kathy@epa.gov>; Arling, Michelle <Arling.Michelle@epa.gov>; Fitz, Nancy <Fitz.Nancy@epa.gov>; Pont,

Richard <Pont.Richard@epa.gov>; Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>
Subject: In case you haven't seen this ..... FW: AAPCO Letter

From: Dennis Howard -MDA- [mailto:dennis.howard@maryland.gov]
Sent: Wednesday, August 31, 2016 10:12 AM
To: Keaney, Kevin <Keaney.Kevin@epa.gov>
Subject: AAPCO Letter

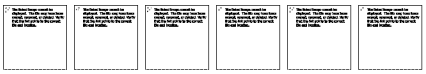
Kevin,

As per your request, I have attached the AAPCO letter that I sent to Director Housenger to this email.

Regards,
Dennis

--
Dennis Howard
Program Manager
Maryland Department of Agriculture
Pesticide Regulation Section
50 Harry S. Truman Parkway
Annapolis, MD 21401
Tele: 410-841-5710 Fax: 410-841-2765
Email: dennis.howard@maryland.gov

Visit Our Website at: www.mda.maryland.gov



August 17, 2016

Jack Housenger, Director
Office of Pesticide Programs
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Director Housenger,

I am writing to you about two issues regarding the revisions to the Agricultural Worker Protection Standard (WPS) that were recently brought to my attention by several Pesticide State Lead Agencies (SLAs). The issues of concern are the availability of the Train-the-Trainer training materials and the Interpretive Guidance regarding Application Exclusion Zones (AEZ).

It is my understanding the Train-the-Trainer training materials will not be available until possibly November 2016. However, starting in January of 2017, trainers of workers must be: (1) certified applicators; (2) designated as trainers by EPA or the State or Tribal agency responsible for pesticide enforcement; or (3) have completed and EPA approved Train-the-Trainer course. Because of the lack of adequate time (2 months) for states to train trainers, or for currently non-certified applicators to become certified, AAPCO is requesting that EPA consider requiring the implementation of the new trainer requirements to coincide with when the new 2018 requirements take effect. This is especially important for states that do not currently have a Train-the-Trainer Program, but will initiate a Train-the-Trainer Program when the new EPA Train the Trainer materials are available.

In regards to the Application Exclusion Zone (AEZ), it is my understanding that EPA is working on an Interpretive Guidance on how to apply the (AEZ) in the field. AAPCO is requesting that EPA consider postponing its adoption until adequate discussion has occurred, and State Lead Agencies and the regulated growers and applicators have had time to comment, and familiarize themselves with the new requirements.

In addition, in regard to agricultural labor housing on a grower's property, AAPCO is requesting that EPA consider allowing SLAs the option of developing an equivalency program, which would

enable farm workers to safely "shelter in place" vs. leaving the AEZ. A number of states have stringent agricultural labor housing regulations or standards. It is believed by many, that if the housing is adequate (fully enclosed and tightly constructed), it is safer to "shelter in place" vs. leaving the AEZ and returning soon after the application. The option of an equivalency program would provide flexibility, and encourage growers to improve labor housing to meet equivalency standards.

Thank you for your attention and consideration of these issues. I look forward to your response and or further discussion.

Respectfully,

Dennis W. Howard

Dennis W. Howard
AAPCO President
Chief Pesticide Regulation Section
Maryland Department of Agriculture

cc: Amy Bamber, AAPCO Executive Secretary

Message

From: Mosby, Jackie [Mosby.Jackie@epa.gov]
Sent: 8/31/2016 6:31:01 PM
To: Messina, Edward [Messina.Edward@epa.gov]; Vizard, Elizabeth [Vizard.Elizabeth@epa.gov]; Lott, Don [Lott.Don@epa.gov]; Sullivan, Greg [Sullivan.Greg@epa.gov]
CC: Keaney, Kevin [Keaney.Kevin@epa.gov]
Subject: FW: In case you haven't seen this ..... FW: AAPCO Letter
Attachments: Letter to Jack Housenger.pdf

FYI, Letter from AAPCO and in it they discuss compliance with WPS. Regards, Jackie

Jacqueline E. Mosby, MPH
Director, Field & External Affairs Division
Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: 703-308-2226, Cell: 202-999-9784, Fax: 703-305-6244
1200 Pennsylvania Avenue, N.W.
Mailstop: 7506P
Washington, DC 20460
Mosby.jackie@epa.gov

From: Keaney, Kevin
Sent: Wednesday, August 31, 2016 1:03 PM
To: Mosby, Jackie <Mosby.Jackie@epa.gov>; Schroeder, Carolyn <Schroeder.Carolyn@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Park, Jennifer <park.jennifer@epa.gov>; Berliner, Joshua <berliner.joshua@epa.gov>; Davis, Kathy <Davis.Kathy@epa.gov>; Arling, Michelle <Arling.Michelle@epa.gov>; Fitz, Nancy <Fitz.Nancy@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>; Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>
Subject: In case you haven't seen this ..... FW: AAPCO Letter

From: Dennis Howard -MDA- [mailto:dennis.howard@maryland.gov]
Sent: Wednesday, August 31, 2016 10:12 AM
To: Keaney, Kevin <Keaney.Kevin@epa.gov>
Subject: AAPCO Letter

Kevin,

As per your request, I have attached the AAPCO letter that I sent to Director Housenger to this email.

Regards,
Dennis

--
Dennis Howard
Program Manager
Maryland Department of Agriculture
Pesticide Regulation Section

50 Harry S. Truman Parkway
Annapolis, MD 21401
Tele: 410-841-5710 Fax: 410-841-2765
Email: dennis.howard@maryland.gov

Visit Our Website at: www.mda.maryland.gov

August 17, 2016

Jack Housenger, Director
Office of Pesticide Programs
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Director Housenger,

I am writing to you about two issues regarding the revisions to the Agricultural Worker Protection Standard (WPS) that were recently brought to my attention by several Pesticide State Lead Agencies (SLAs). The issues of concern are the availability of the Train-the-Trainer training materials and the Interpretive Guidance regarding Application Exclusion Zones (AEZ).

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In addition, in regard to agricultural labor housing on a grower's property, AAPCO is requesting that EPA consider allowing SLAs the option of developing an equivalency program, which would

enable farm workers to safely "shelter in place" vs. leaving the AEZ. A number of states have stringent agricultural labor housing regulations or standards. It is believed by many, that if the housing is adequate (fully enclosed and tightly constructed), it is safer to "shelter in place" vs. leaving the AEZ and returning soon after the application. The option of an equivalency program would provide flexibility, and encourage growers to improve labor housing to meet equivalency standards.

Thank you for your attention and consideration of these issues. I look forward to your response and or further discussion.

Respectfully,

Dennis W. Howard

Dennis W. Howard
AAPCO President
Chief Pesticide Regulation Section
Maryland Department of Agriculture

cc: Amy Bamber, AAPCO Executive Secretary

Message

From: Yarger, Ryne [Yarger.Ryne@epa.gov]
Sent: 8/2/2019 4:47:10 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]
CC: Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Herndon, George [Herndon.George@epa.gov]; OPP FEAD CWPB [OPP_FEAD_CWPB@epa.gov]
Subject: WPS AEZ - Action Memo for NPRM and Memo to the Docket Re: Post-EO 12866 Changes for Review
Attachments: Draft_WPS AEZ Action Memo_2019-08-01.docx; Draft_WPS AEZ_Memo to Docket on Post 12866 Changes_2019-08-02.docx

Hi Jackie and Rick,

Attached are two documents for your review/concurrence:

Ex. 5 Deliberative Process (DP)

Please let us know if you have any comments/edits.

Thanks,
Ryne Yarger
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(703) 605-1193

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 5/31/2019 2:31:44 PM
To: Mosby, Jackie [Mosby.Jackie@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]
CC: Herndon, George [Herndon.George@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]; CWPB [CWPB@epa.gov]; Kiely, Timothy [Kiely.Timothy@epa.gov]; Berwald, Derek [Berwald.Derek@epa.gov]; Lee, Andrew [Lee.Andrew@epa.gov]; Wyatt, TJ [Wyatt.Tj@epa.gov]
Subject: FOR YOUR REVIEW - WPS/AEZ proposal - post-OMB/ federal agencies review
Attachments: RUNNING MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-05-31.docx

Importance: High

Jackie, Ed, Rick and Wynne --

Ex. 5 Deliberative Process (DP)

Thanks-
Jeanne

Jeanne Kasai, USEPA
Office of Pesticide Programs, Certification & Worker Protection Branch
tel. 703-308-3240, kasai.jeanne@epa.gov
http://www.epa.gov/pesticide-worker-safety
EPA United States Environmental Protection Agency

From: Smith, Peterj
Sent: Friday, May 31, 2019 10:21 AM
To: Kasai, Jeanne <Kasai.Jeanne@epa.gov>
Cc: CWPB <CWPB@epa.gov>
Subject: RE: FOR OPP MANAGEMENT REVIEW: Markup of WPS/AEZ NPRM
Importance: High

Hi Jeanne,

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
NOTICE: *If this electronic communication explains, justifies, or documents an official action or decision, it may be subject to federal records requirements. Federal employees should evaluate the contents of this message before deleting it.*
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Kasai, Jeanne
Sent: Thursday, May 30, 2019 6:50 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: CWPB <CWPB@epa.gov>
Subject: FW: FOR OPP MANAGEMENT REVIEW: Markup of WPS/AEZ NPRM
Importance: High

Hi Peter –
Please consider the edits in the attached pdf. Most are grammatical, a few are to try to make a point clearer, and a few are questions/rewrites based on other text. Feel free to ignore any edits you think don't make sense.

Page	Line(s)
4	72
6	136
15	340
16	362, 375 (question here)
18	411, 417
19	434, 438, 442 – 447, 453
20	456, 464, 473
21	484
22	509, 514
23	535 – 536
24	555 – 558, 568
25	580, 583 – 584
34	766
36	787, 800, 807

I really am not doing this to make more work for you!

Thanks! Sorry!
Jeanne
p.s. notice I left Scott and Jan off of the cc: list. I thought it best if we could resolve these first.

From: Smith, Peterj
Sent: Thursday, May 30, 2019 11:54 AM
To: OPP FEAD CWPB <OPP_FEAD_CWPB@epa.gov>
Cc: Garrison, Scott <Garrison.Scott@epa.gov>; Gilbreath, Jan <Gilbreath.Jan@epa.gov>
Subject: FOR OPP MANAGEMENT REVIEW: Markup of WPS/AEZ NPRM
Importance: High

Hi everyone,

I have attached the running markup of the draft NPRM that reflects revisions incorporated after:

- our 5/23 interagency call

Ex. 5 Deliberative Process (DP)

- receiving clarifying edits/corrections from OPP and OGC this week.

RICS also has some minor changes to the regulatory text (asterixis, words of issuance etc.). The one that will stand out most clearly is the change to 170.601. As previously presented, OFR would have required us to insert a designation table (a separate "words of issuance" instruction), so we handled as a revision instead - presenting the full text 170.601(a)(1) as it would read upon incorporation in the CFR.

All changes are noted with comment balloons. The comment balloons identify revisions not previously reviewed by management as **NEW.** The NPRM is now ready to begin OPP management review upon CWPB's say-so.

Best,
Peter

****
NOTICE: *If this electronic communication explains, justifies, or documents an official action or decision, it may be subject to federal records requirements. Federal employees should evaluate the contents of this message before deleting it.*
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

Message

From: Jones, Danielle Y. EOP/OMB [Danielle_Y_Jones@omb.eop.gov]
Sent: 5/24/2019 1:40:29 PM
To: Smith, Peterj [Smith.Peterj@epa.gov]
CC: Hofmann, Angela [Hofmann.Angela@epa.gov]; DeBruhl, Brandon F. EOP/OMB [Brandon_F_DeBruhl@omb.eop.gov]; Gilbreath, Jan [Gilbreath.Jan@epa.gov]
Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Attachments: RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-02-22_dlh6 rev 5-23-....docx

Hi Peter,

Please see the attachment with recommended edits and comments from CDC for EPA's consideration. If EPA would like to schedule a meeting with CDC for next week, please work with my colleague Brandon De Bruhl to schedule. I have cc him on this email.

Best,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]
Sent: 6/27/2019 3:33:07 PM
To: Messina, Edward [Messina.Edward@epa.gov]
CC: Lloyd, Matthew [Lloyd.Matthew@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Lantz, Tracy [Lantz.Tracy@epa.gov]; Williams, Venese [Williams.Venese@epa.gov]
Subject: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004
Attachments: EPA-HQ-OPP-2019-004 MEMO to SRO_ver2.docx; Buck slip for routing NFPT_ RFA_EPA-HQ-OPP-2019-004 JK_JM_VW BK 6-18-19_djb_wfm.pdf; Draft Transmittal Note for SRO File_EPA-HQ-OPP-2019-004_RFA 6.03.19.docx; PO Milestones AFOP RFA 06.20.19..pdf; QARF-NFTP.RFA.signed.docx.pdf; DRAFT RFA- EPA_HQ-OPP-2019-004_ farmworker training program.arl.06.18.19.docx

Hi Ed,

Attached is a copy of the new National Farmworker Training Program RFA (EPA-HQ-OPP-2019-004) for your review. All supporting documents are attached. Once you complete your review (and any comments are addressed), please e-sign the buck slip and return to me. Please let us know if you have any questions.

Thanks,
Ana

Ana Rivera-Lupiáñez
Pesticide Worker Safety Programs
Office of Pesticide Programs
Environmental Protection Agency
rivera-lupianez.ana@epa.gov
(703) 308-6841

From: Miller, Wynne
Sent: Thursday, June 27, 2019 10:52 AM
To: Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>
Cc: Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Williams, Venese <Williams.Venese@epa.gov>
Subject: RE: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004

Thanks Ana – everything looks good. I only made a few minor edits to the SRO memo. Also, I've attached the signed buck slip.
Regards,
Wynne
***

Wynne Miller, Acting Deputy Office Director of Management
Office of Pesticide Programs (OPP)
Office of Chemical Safety and Pollution Prevention (OCSPP)
(Phone) 703-308-8111
(Fax) 703-308-8091
Mail code 7503P
Room # PYS 4641

From: Rivera-Lupianez, Ana
Sent: Tuesday, June 25, 2019 8:42 AM
To: Miller, Wynne <Miller.Wynne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>

Cc: Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Williams, Venese <Williams.Venese@epa.gov>
Subject: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004

Good morning Wynne,

Attached is a copy of the new National Farmworker Training Program RFA (EPA-HQ-OPP-2019-004) for your review. All supporting documents are attached. Once you complete your review (and any comments are addressed), please e-sign the buck slip and return to me. Please let us know if you have any questions.

Thanks,
Ana

Ana Rivera-Lupiáñez
Pesticide Worker Safety Programs
Office of Pesticide Programs
Environmental Protection Agency
rivera-lupianez.ana@epa.gov
(703) 308-6841

From: Barber, Delores
Sent: Tuesday, June 25, 2019 8:31 AM
To: Lantz, Tracy <Lantz.Tracy@epa.gov>
Cc: Barber, Delores <barber.delores@epa.gov>; Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Williams, Venese <Williams.Venese@epa.gov>; Katz, Brian <Katz.Brian@epa.gov>; Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>
Subject: FW: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004

Hi Tracy, I have reviewed the documents and the signed buck slip is attached. Please excuse my delay, I was out of the office for 2 days last week.

Thanks,
Delores

From: Lantz, Tracy
Sent: Thursday, June 20, 2019 7:29 PM
To: Barber, Delores <barber.delores@epa.gov>
Cc: Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Williams, Venese <Williams.Venese@epa.gov>; Katz, Brian <Katz.Brian@epa.gov>; Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>
Subject: FW: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004

Hi Delores,

Attached is a copy of the new National Farmworker Training Program RFA (EPA-HQ-OPP-2019-004) for your review. All supporting documents are attached. Once you complete your review (and any comments are addressed), please e-sign the buck slip and return to me. Please let Ana and I know if you have any questions.

Tracy Lantz
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs
Environmental Protection Agency

Office: (703) 308-6415
Mobile: (571) 481-8523
Lantz.tracy@epa.gov

From: Rivera-Lupianez, Ana
Sent: Thursday, June 20, 2019 3:03 PM
To: Katz, Brian <Katz.Brian@epa.gov>
Cc: Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Williams, Venese <Williams.Venese@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>
Subject: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004

Hi Brian,

Attached is a copy of the new National Farmworker Training Program RFA (EPA-HQ-OPP-2019-004) for your review. All supporting documents are attached. Once you complete your review (and any comments are addressed), please e-sign the buck slip and return to me. Please let us know if you have any questions.

Thanks,
Ana

Ana Rivera-Lupiáñez
Pesticide Worker Safety Programs
Office of Pesticide Programs
Environmental Protection Agency
rivera-lupianez.ana@epa.gov
(703) 308-6841

From: Williams, Venese
Sent: Tuesday, June 18, 2019 5:12 PM
To: Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Lloyd, Matthew <Lloyd.Matthew@epa.gov>
Cc: Katz, Brian <Katz.Brian@epa.gov>
Subject: FW: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004
Importance: High

Hi Ana

I have completed my review for the new National Farmworker Training Program (NFTP) RFA with no comments to add. You can move the attached documents forward for approval. Let me know if you have any additional questions.

Thanks
Venese

From: Rivera-Lupianez, Ana
Sent: Monday, June 10, 2019 10:21 AM
To: Williams, Venese <Williams.Venese@epa.gov>
Cc: Katz, Brian <Katz.Brian@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Lloyd, Matthew <Lloyd.Matthew@epa.gov>
Subject: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004
Importance: High

Good morning Venese,

Attached is a copy of the new National Farmworker Training Program RFA (EPA-HQ-OPP-2019-004) for your review. I'm also attaching the QARF form, a copy of the milestones, and an approval routing slip (buck slip). Once you review the RFA (and any comments are addressed), please sign, date and scan the buck slip before forwarding it. Please let us know if you have any questions.

Thanks,
Ana

Ana Rivera-Lupiáñez
Pesticide Worker Safety Programs
Office of Pesticide Programs
Environmental Protection Agency
rivera-lupianez.ana@epa.gov
(703) 308-6841

Select an Option

ROUTING AND APPROVAL FORM

Date: June 5, 2019

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Jeanne Kasai, CWPB, Team lead	JHK	June 5, 2019
2. Jackie Mosby, FEAD, Division Director	JEM	June 11, 2019
3. Venese Williams, OPP, Grants Coordinator	Venese Williams	June 18, 2019
4. Brian Katz, ITRMD, Supervisory Program Analyst	Brian Katz	June 18, 2019
5. Delores Barber, ITRMD, Director	Delores Barber	June 25, 2019
6. Wynne Miller, OPP, Acting Deputy Director	Wynne Miller	June 27, 2019
7. Edward Messina, OPP, Deputy Director		
8. Deon Moore, OCSPP JRO		
9. Arnold Layne, OCSPP SRO		
10.		

☐	Action	☐	File	☐	Note and Return
☒	Approval	☐	For Clearance	☐	Per Conversation
☐	As Requested	☐	For Correction	☐	Prepare Reply
☐	Circulate	☐	For Your Information	☐	See Me
☐	Comment	☐	Investigate	☐	Signature
☐	Coordination	☐	Justify		

REMARKS

Please review, comment and sign-off on this request for applications (RFA) for a new National Farmworker Training Program (NFTP) cooperative agreement.

The existing National Farmworker Training agreement with Association of Farmworker Opportunity Programs expires in September 2020. There are many steps to take before the RFA can be posted in Grants.gov for competition.

It is important to continue a strong pesticide safety program which includes training and education aimed at reducing exposure to pesticides for agricultural workers, their families and the agricultural community at large.

Thank you!

FROM: (Name, org. symbol, Agency/Post)	Room No. – Bldg.
Ana Rivera-Lupianez (Delegate Jeanne Kasai)	S7346
	Phone No. (703) 308-6841

ORD OF - 41

(Rev. 5-14) (WebForms v3.7)

Audit Trail for

ORD Routing and Approval Form

PDF Name: ORDOF41.pdf
Form Number: ORD-OF41
Document Identifier: ORD-OF41-17075113749-JK

Message

From: Keller, Kaitlin [keller.kaitlin@epa.gov]
Sent: 8/9/2019 3:34:59 PM
To: Messina, Edward [Messina.Edward@epa.gov]
Subject: FW: WPS/AEZ Update - FIFRA SAP Declines to Waive Review
Attachments: 2018-07-20 Letter to FIFRA SAP.pdf; 2019-06-10 Letter to FIFRA SAP.pdf; A couple of questions.pdf; D=EPA-HQ-OPP-2017-0693-003.pdf; FIFRA Review Letter_AgWPS-AEZ NPRM_OPP to SAP_2019-07-31.pdf; FIFRA Review_AgWPS-AEZ_DraftNPRM_2019-07-10.pdf; Response from Chair 20190808.pdf; Waiver Request to OPP 20190808.pdf

See highlight below.

From: Smith, Peterj <Smith.Peterj@epa.gov>
Sent: Friday, August 9, 2019 7:24 AM
To: Hofmann, Angela <Hofmann.Angela@epa.gov>
Cc: Chun, Melissa <Chun.Melissa@epa.gov>; Richmond, Jonah <Richmond.Jonah@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>
Subject: WPS/AEZ Update - FIFRA SAP Declines to Waive Review

From: Yarger, Ryne <Yarger.Ryne@epa.gov>
Sent: Thursday, August 08, 2019 4:01 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Subject: FW: Request for FIFRA SAP waiver of EPA's proposed rule, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)."

FYI

From: Knott, Steven <Knott.Steven@epa.gov>
Sent: Thursday, August 08, 2019 3:44 PM
To: Yarger, Ryne <Yarger.Ryne@epa.gov>
Cc: Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hughes, Hayley <hughes.hayley@epa.gov>; Schroeder, Carolyn <Schroeder.Carolyn@epa.gov>; Herndon, George <Herndon.George@epa.gov>
Subject: Re: Request for FIFRA SAP waiver of EPA's proposed rule, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)."

Ryne,

Ex. 5 Deliberative Process (DP)

Steve

Message

From: Knott, Steven [Knott.Steven@epa.gov]
Sent: 7/16/2019 7:14:11 PM
To: Yarger, Ryne [Yarger.Ryne@epa.gov]
CC: Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Hughes, Hayley [hughes.hayley@epa.gov]
Subject: RE: Request for FIFRA SAP waiver of EPA's proposed rule, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)."
Attachments: FIFRA Review Letter_AgWPS-AEZ NPRM_OPP to SAP_2019-07-12.pdf; FIFRA Review_AgWPS-AEZ_DraftNPRM_2019-07-10.pdf; D=EPA-HQ-OPP-2017-0693-003.pdf; 2019-06-10 Letter to FIFRA SAP.pdf; A couple of questions.pdf; 2018-07-20 Letter to FIFRA SAP.pdf

Ryne,

Ex. 5 Deliberative Process (DP)

Steve

Steven M. Knott, M.S.
Chemist and Executive Secretary
FIFRA Scientific Advisory Panel and
Science Advisory Committee on Chemicals
U.S. EPA Office of Science Coordination and Policy
Knott.steven@epa.gov
(202) 564-0103

From: Yarger, Ryne
Sent: Friday, July 12, 2019 3:04 PM
To: Knott, Steven <Knott.Steven@epa.gov>
Cc: Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>
Subject: Request for FIFRA SAP waiver of EPA's proposed rule, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)."
Importance: High

Hi Steven,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
Ryne Yarger
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(703) 605-1193

Message

From: Strauss, Linda [Strauss.Linda@epa.gov]
Sent: 3/13/2019 2:41:51 PM
To: Sisco, Debby [Sisco.Debby@epa.gov]; Han, Kaythi [Han.Kaythi@epa.gov]
CC: Dunton, Cheryl [Dunton.Cheryl@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]
Subject: due at 12:00 today -- AEZ back-pockets Q's

Ex. 5 Deliberative Process (DP)

From: Strauss, Linda
Sent: Tuesday, March 12, 2019 11:11 AM
To: Kaiser, Sven-Erik <Kaiser.Sven-Erik@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Sisco, Debby <Sisco.Debby@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>
Subject: FW: Summary of AEZ Changes -

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

From: Kaiser, Sven-Erik
Sent: Tuesday, March 12, 2019 10:42 AM
To: Overstreet, Anne <overstreet.anne@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Strauss, Linda <Strauss.Linda@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>
Subject: RE: Summary of AEZ Changes -

Ex. 5 Deliberative Process (DP)

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Ex. 5 Deliberative Process (DP)

Sven

Sven-Erik Kaiser
U.S. EPA
Office of Congressional and Intergovernmental Relations
1200 Pennsylvania Ave., NW (1305A)
Washington, DC 20460
202-566-2753 (o)
Ex. 6 Personal Privacy (PP)

From: Overstreet, Anne
Sent: Tuesday, March 12, 2019 10:22 AM
To: Han, Kaythi <Han.Kaythi@epa.gov>; Strauss, Linda <Strauss.Linda@epa.gov>; Kaiser, Sven-Erik <Kaiser.Sven-Erik@epa.gov>
Cc: Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>
Subject: Summary of AEZ Changes -

Ex. 5 Deliberative Process (DP)

Anne Overstreet, Chief
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs (7510P)
U.S. Environmental Protection Agency
(703) 308-8068

Overstreet.anne@epa.gov
http://www.epa.gov/pesticides

From: Keigwin, Richard
Sent: Wednesday, March 6, 2019 5:56 AM
To: Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: AEZ Changes

Ex. 5 Deliberative Process (DP)

Message

From: Vizard, Elizabeth [Vizard.Elizabeth@epa.gov]
Sent: 12/4/2015 3:40:31 PM
To: Fan, Shirley [Fan.Shirley@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Lott, Don [Lott.Don@epa.gov]; Miles, James [miles.james@epa.gov]; Walker, Yolaanda [Walker.Yolaanda@epa.gov]; Hellyer, Yvette [Hellyer.Yvette@epa.gov]
Subject: FW: EPA's Interpretation of the WPS Application Exclusion Zones - Complaint from NC Ag
Attachments: WPS AEZ Letterhead comments to EPA Assistant Administrator Jim Jones_ 12_4_2015.pdf

FYI,
NC submits and Indiana concurs on written comment to Jim Jones regarding EPA's application exclusion zone in new WPS rule before the end of the San Diego, CA PREP this week. May come up during the EPA-SFIREG meeting Monday-Tues in PY.

Elizabeth Vizard, Chief
Pesticide, Waste & Toxics Branch
Monitoring, Assistance & Media Programs Division
Office of Compliance
202-564-5940

From: Galloway, Carol
Sent: Thursday, December 03, 2015 5:33 PM
To: Vizard, Elizabeth <Vizard.Elizabeth@epa.gov>
Subject: FYI: EPA's Interpretation of the WPS Application Exclusion Zones - Complaint from NC Ag

Ex. 5 Deliberative Process (DP)

From: Baumgartner, Donald
Sent: Thursday, December 03, 2015 3:47 PM
To: Pont, Richard <Pont.Richard@epa.gov>; Galloway, Carol <Galloway.Carol@epa.gov>; Fitz, Nancy <Fitz.Nancy@epa.gov>; Davis, Kathy <Davis.Kathy@epa.gov>; Keaney, Kevin <Keaney.Kevin@epa.gov>; Hellyer, Yvette <Hellyer.Yvette@epa.gov>
Cc: Baumgartner, Donald <baumgartner.donald@epa.gov>
Subject: EPA's Interpretation of the WPS Application Exclusion Zones - Complaint from NC Ag

The attached was recently shared with me, and I herein share with you as FYI. State comment based already on the WPS PREP held this week!

Donald

Donald Baumgartner, B.S., M.S. Medical Entomologist
Minnesota Technical Contact, R5 WPS Coord., Bed Bug Specialist
Pesticides Section (LC-8J), Chemicals Mgt. Branch
U.S. Environmental Protection Agency Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604
ph. 312/886-7835
fax 312/697-2531
baumgartner.donald@epa.gov
For pesticide information visit http://www.epa.gov/pesticides/ or http://npic.orst.edu/
R5 Bed Bug Hotline at 888/644-2200 or bedbugs@umn.edu
To report environmental violations visit http://www.epa.compliance/complaints/index.html
Life Lesson: We do not stop playing because we grow old; we grow old because we stop playing.

Have a Bed Bug Free Day!!

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EPA United States Environmental Protection Agency

From: Scott, David E [mailto:scottde@purdue.edu]
Sent: Thursday, December 03, 2015 3:10 PM
To: Wilkinson, Bruce <wilkinson.bruce@epa.gov>; Baumgartner, Donald <baumgartner.donald@epa.gov>
Cc: Reed, Leo A <reedla@purdue.edu>; saxtong@purdue.edu; Becovitz, Joseph David <becovitz@purdue.edu>; Waltz, Robert D <rwaltz@purdue.edu>
Subject: FW: RE: EPA's interpretation of the WPS Application Exclusion Zones

Gentlemen,

Just an FYI. Indiana very much supports the position in Jim Burnette's letter.

From: Burnette, James [mailto:james.burnette@ncagr.gov]
Sent: Thursday, December 03, 2015 11:38 AM
To: jpeterson@azda.gov; Scott, David E
Subject: FW: RE: EPA's interpretation of the WPS Application Exclusion Zones

I just sent this.

Jim

From: Burnette, James
Sent: Thursday, December 03, 2015 11:35 AM
To: 'Jones.jim@epa.gov' <Jones.jim@epa.gov>
Cc: 'Jordan.william@epa.gov' <Jordan.william@epa.gov>; 'cmoses@agri.nv.gov' <cmoses@agri.nv.gov>; cary.giguere@state.vt.us; 'Corbett, Richard' <Corbett.Richard@epa.gov>; Reardon, Joe W <joe.reardon@ncagr.gov>; Jones, Patrick <patrick.jones@ncagr.gov>
Subject: RE: EPA's interpretation of the WPS Application Exclusion Zones

Jim:

I hope this email finds you well and looking forward to the holidays!

Please see our attached comments on the Agency's interpretation of the new WPS Application Exclusion Zones as discussed earlier this week during the San Diego CA PREP course.

Sincerely,

Jim

Steve Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Structural Pest Control and Pesticides Division

James W. Burnette, Jr.
Director

December 4, 2015

Mr. James J. Jones
Assistant Administrator
Office of Chemical Safety and Pollution Prevention
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 7101 M
Washington, DC 20460

Jim:

Many of us have been following the discussion taking place at PREP this week concerning the revisions to the WPS, first with great interest and now, learning of EPA's current interpretation of parts of the standard---with even greater concern.

Our concern stems from discussion of the requirements for the newly inserted no entry Application Exclusion Zone (AEZ) of up to 100 feet surrounding application equipment and EPA's insistence/interpretation that no one can be in this area--- not a person in a car, not a person in a house across the road from a field, not someone wanting to stop the application by merely standing/parking their vehicle at the edge of the farmer's field and refusing to leave.

Since the inception of the Worker Protection Standards, which North Carolina Pesticide Board saw fit to adopt by reference as our State's standard, the intent and appropriate focus of the WPS has been prescribing measures to be taken by employers and their employees to protect workers and handlers engaged in the production of agricultural

Structural Pest Control and Pesticides Division
Structural Pest Control Section ● Phone: (919) 733-6100 ● FAX: (919) 733-0633
Pesticide Section● (919) 733-3556 ● Fax (919) 733-9796
1090 Mail Service Center, Raleigh, North Carolina 27699-1090
www.ncagr.com/str-pest/

An Equal Opportunity Affirmative Action Employer

plants. This has included prohibiting entry into treated areas during applications. Apparently, with the insertion of the AEZ, EPA moved far beyond this intent to prohibit not only entry during applications into "other areas"-- which may include areas well beyond the property of the agricultural establishment; but now the Standard will allow persons not even in the employ of an agricultural establishment, nor having any association with the agricultural establishment –to stop critical pest management practices on that establishment, simply by refusing to leave the AEZ.

Don't get us wrong, no one suggests that any person should be exposed to pesticides, but given that with the AEZ moves the WPS from the agricultural establishment and subjects growers to unreasonable notification and performance burdens, we firmly believe this constitutes a "taking" of the growers' land. They will not be able to spray their fields if there is a house within the AEZ even if the wind is blowing away, windows closed etc.—and what if the occupants refuse to leave the premises—a very real possibility? Growers' operations can now effectively be held hostage by persons whose only interest may be to prevent pesticides from being applied.

One of EPA's recommended best practices under the pollinator protection strategy is that consider applying pesticides in the evenings and when temperatures are below 55 degrees-- when pollinators are not active. If a grower does this, is that grower now expected under the WPS to go to a neighboring home say, at midnight, and inform the occupants that they need to leave their residence so he can spray? Again, what if they refuse? Or, by telling them this, does the grower raise more concerns in the minds of the occupants—if I have to leave my home because of the spraying, what risks am I facing when I return? Does this seem practical; reasonable; logical?

We are equally dismayed that this AEZ was not presented as part the proposed regulations and thus was not something that the States or others were given opportunity to consider and comment on. Instead we were only asked to comment on buffer zones concept, which it was our understanding, would only be applicable up to the boundaries of the agricultural establishment, and on which we did submit comments. For EPA to have made such substantive change to the original proposal as published for public comment, without providing additional comment opportunities runs afoul of the productive performance partnerships between the SLA's and the Agency.

As I have stated, there are two major issues with the Agency's current interpretation—and ones for which we fully expect that the Agency could be challenged: 1)The Agency did not follow established and appropriate re-publication and comment procedures prior to including such a significant change; and 2) The unreasonable burdens and economic impacts upon agricultural operations and employers have not been appropriately considered or addressed, and thus, this rule amounts to an " unlawful taking."

We value our longstanding partnership with EPA, however we are greatly disappointed in the position EPA has taken on the AEZ issue, and would urge the Agency to reconsider its interpretation and provide sufficient opportunity for public comment before implementing these requirements.

Sincerely,

Jim Burnette

Cc:

William Jordan, Deputy Director, EPA Office of Pesticide Programs
Jordan.william@epa.gov

Chuck Moses, AAPCO President
cmoses@agri.nv.gov

Carey Guigere, SFIREG Chair
Cary.giguere@state.vt.us

Richard Corbett, EPA Region 4 Project Officer
Corbett.Richard@epa.gov

Joe Reardon, Assistant Commissioner
joe.reardon@ncagr.gov

Message

From: Keigwin, Richard [Keigwin.Richard@epa.gov]
Sent: 5/20/2019 1:26:22 PM
To: Sisco, Debby [Sisco.Debby@epa.gov]
CC: Dinkins, Darlene [Dinkins.Darlene@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Han, Kaythi [Han.Kaythi@epa.gov]; Borges-Silva, Quentin [Borges-Silva.Quentin@epa.gov]
Subject: RE: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

This looks fine to me.

From: Sisco, Debby
Sent: Monday, May 20, 2019 7:50 AM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>
Cc: Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Borges-Silva, Quentin <Borges-Silva.Quentin@epa.gov>
Subject: FW: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Rick,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Debby Sisco
Ethics Officer and Special Assistant to the Director
Office of Pesticide Programs (7501P)
US Environmental Protection Agency
4th floor - 4241 Potomac Yard South
(office: 703 308-8121; Ex. 6 Personal Privacy (PP)

From: Messina, Edward
Sent: Friday, May 17, 2019 5:12 PM
To: Dinkins, Darlene <Dinkins.Darlene@epa.gov>
Cc: Keigwin, Richard <Keigwin.Richard@epa.gov>; Sisco, Debby <Sisco.Debby@epa.gov>
Subject: Re: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ok. Do you need my ok today or can this wait for Rick on Monday? I'm fine with the language.

———————————————————————

Ed Messina
Acting Deputy Office Director (Programs)
Office of Pesticide Programs
U.S. EPA
(703) 347-0209

On May 17, 2019, at 4:40 PM, Dinkins, Darlene <Dinkins.Darlene@epa.gov> wrote:

Ed,

Ex. 5 Deliberative Process (DP)

Darlene Dinkins
Office of Pesticide Programs
U.S. Environmental Protection Agency
(703) 305-5214

From: Han, Kaythi
Sent: Friday, May 17, 2019 10:51 AM
To: Dinkins, Darlene <Dinkins.Darlene@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Borges-Silva, Quentin <Borges-Silva.Quentin@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hoyt, Sarita <Hoyt.Sarita@epa.gov>; Naimy, Nina <Naimy.Nina@epa.gov>
Subject: FW: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Hi Darlene,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Kaythi Han
Team Leader, Communication Services Branch
Office of Pesticide Programs
U.S. Environmental Protection Agency
(703) 305-5642 | han.kaythi@epa.gov

From: Strauss, Linda
Sent: Wednesday, May 15, 2019 9:48 AM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Siedschlag, Gregory <Siedschlag.Gregory@epa.gov>; Dunton, Cheryl <Dunton.Cheryl@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>

Subject: RE: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Thanks!!

From: Keigwin, Richard
Sent: Wednesday, May 15, 2019 5:05 AM
To: Strauss, Linda <Strauss.Linda@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Siedschlag, Gregory <Siedschlag.Gregory@epa.gov>; Dunton, Cheryl <Dunton.Cheryl@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>
Subject: Re: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ex. 5 Deliberative Process (DP)

Rick Keigwin
Director, Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: 703-305-7090
Website: www.epa.gov/pesticides
Sent from my iPhone

On May 14, 2019, at 9:10 PM, Strauss, Linda <Strauss.Linda@epa.gov> wrote:

> See below, and thanks in advance!
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** "Bertrand, Charlotte" <Bertrand.Charlotte@epa.gov>
> > **Date:** May 14, 2019 at 6:31:44 PM EDT
> > **To:** "Strauss, Linda" <Strauss.Linda@epa.gov>
> > **Cc:** "Dunton, Cheryl" <Dunton.Cheryl@epa.gov>
> > **Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments**
>
> **Ex. 5 Deliberative Process (DP)**
>
> > **From:** Strauss, Linda
> > **Sent:** Tuesday, May 14, 2019 6:28 PM
> > **To:** Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
> > **Cc:** Dunton, Cheryl <Dunton.Cheryl@epa.gov>

Subject: Re: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ex. 5 Deliberative Process (DP)

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Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Sent from my iPhone

On May 14, 2019, at 6:04 PM, Bertrand, Charlotte <Bertrand.Charlotte@epa.gov> wrote:

> Looks like AEZ would be at the earliest next week.
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> **From:** Smith, Peterj
> **Sent:** Tuesday, May 14, 2019 3:53 PM
> **To:** Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
> **Cc:** Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>
> **Subject:** RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments
>
> Good afternoon,

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
****
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****
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Beck, Nancy
Sent: Tuesday, May 14, 2019 11:08 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Yes. many thanks to FEAD!

Nancy B. Beck, Ph.D., DABT
Principal Deputy Assistant Administrator, OCSPP
P: 202-564-1273
beck.nancy@epa.gov

From: Smith, Peterj
Sent: Tuesday, May 14, 2019 11:02 AM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela

<Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Hi Nancy,

Ex. 5 Deliberative Process (DP)

Best,
Peter

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Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Beck, Nancy
Sent: Monday, May 13, 2019 6:53 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott

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Ex. 5 Deliberative Process (DP)

Thanks,
Nancy

****
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Nancy B. Beck, Ph.D., DABT
Principal Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
P: 202-564-1273
beck.nancy@epa.gov

From: Smith, Peterj
Sent: Friday, May 10, 2019 2:53 PM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
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Subject: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

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Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Beck, Nancy
Sent: Monday, April 29, 2019 10:06 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne

<overstreet.anne@epa.gov>
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Ex. 5 Deliberative Process (DP)

Nancy B. Beck, Ph.D., DABT
Principal Deputy Assistant Administrator, OCSPP
P: 202-564-1273
beck.nancy@epa.gov

From: Smith, Peterj
Sent: Friday, April 26, 2019 11:28 AM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Good morning!

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Best,
Peter

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****
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

Message

From: Sisco, Debby [Sisco.Debby@epa.gov]
Sent: 5/20/2019 11:49:40 AM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]
CC: Dinkins, Darlene [Dinkins.Darlene@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Han, Kaythi [Han.Kaythi@epa.gov]; Borges-Silva, Quentin [Borges-Silva.Quentin@epa.gov]
Subject: FW: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Rick,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Debby Sisco
Ethics Officer and Special Assistant to the Director
Office of Pesticide Programs (7501P)
US Environmental Protection Agency
4th floor - 4241 Potomac Yard South

(office: 703 308-8121; Ex. 6 Personal Privacy (PP)

From: Messina, Edward
Sent: Friday, May 17, 2019 5:12 PM
To: Dinkins, Darlene <Dinkins.Darlene@epa.gov>
Cc: Keigwin, Richard <Keigwin.Richard@epa.gov>; Sisco, Debby <Sisco.Debby@epa.gov>
Subject: Re: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ok. Do you need my ok today or can this wait for Rick on Monday? I'm fine with the language.

———————————————————————

Ed Messina
Acting Deputy Office Director (Programs)
Office of Pesticide Programs
U.S. EPA
(703) 347-0209

On May 17, 2019, at 4:40 PM, Dinkins, Darlene <Dinkins.Darlene@epa.gov> wrote:

Ed,

Ex. 5 Deliberative Process (DP)

Darlene Dinkins
Office of Pesticide Programs
U.S. Environmental Protection Agency
(703) 305-5214

From: Han, Kaythi
Sent: Friday, May 17, 2019 10:51 AM
To: Dinkins, Darlene <Dinkins.Darlene@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Borges-Silva, Quentin <Borges-Silva.Quentin@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hoyt, Sarita <Hoyt.Sarita@epa.gov>; Naimy, Nina <Naimy.Nina@epa.gov>
Subject: FW: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Hi Darlene,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Kaythi Han
Team Leader, Communication Services Branch
Office of Pesticide Programs
U.S. Environmental Protection Agency
(703) 305-5642 | han.kaythi@epa.gov

From: Strauss, Linda
Sent: Wednesday, May 15, 2019 9:48 AM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Siedschlag, Gregory <Siedschlag.Gregory@epa.gov>; Dunton, Cheryl <Dunton.Cheryl@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>
Subject: RE: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Thanks!!

From: Keigwin, Richard
Sent: Wednesday, May 15, 2019 5:05 AM
To: Strauss, Linda <Strauss.Linda@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Han, Kaythi

<Han.Kaythi@epa.gov>; Siedschlag, Gregory <Siedschlag.Gregory@epa.gov>; Dunton, Cheryl <Dunton.Cheryl@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>
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Sent from my iPhone

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> > **Date:** May 14, 2019 at 6:31:44 PM EDT
> > **To:** "Strauss, Linda" <Strauss.Linda@epa.gov>
> > **Cc:** "Dunton, Cheryl" <Dunton.Cheryl@epa.gov>
> > **Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments**
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>
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> > **Sent:** Tuesday, May 14, 2019 6:28 PM
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> **Ex. 5 Deliberative Process (DP)**

Ex. 5 Deliberative Process (DP)

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Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Good afternoon,

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
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Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

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Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

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Nancy B. Beck, Ph.D., DABT
Principal Deputy Assistant Administrator, OCSPP
P: 202-564-1273
beck.nancy@epa.gov

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Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Hi Nancy,

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Best,
Peter

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1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

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Ex. 5 Deliberative Process (DP)

Nancy

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Principal Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
P: 202-564-1273
beck.nancy@epa.gov

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From: Smith, Peterj
Sent: Friday, April 26, 2019 11:28 AM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Good morning!

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
****

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****
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

Message

From: Dinkins, Darlene [Dinkins.Darlene@epa.gov]
Sent: 5/17/2019 8:40:02 PM
To: Messina, Edward [Messina.Edward@epa.gov]
CC: Keigwin, Richard [Keigwin.Richard@epa.gov]; Sisco, Debby [Sisco.Debby@epa.gov]
Subject: FW: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ed,

Ex. 5 Deliberative Process (DP)

Darlene Dinkins
Office of Pesticide Programs
U.S. Environmental Protection Agency
(703) 305-5214

From: Han, Kaythi
Sent: Friday, May 17, 2019 10:51 AM
To: Dinkins, Darlene <Dinkins.Darlene@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Borges-Silva, Quentin <Borges-Silva.Quentin@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Hoyt, Sarita <Hoyt.Sarita@epa.gov>; Naimy, Nina <Naimy.Nina@epa.gov>
Subject: FW: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Hi Darlene,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Kaythi Han
Team Leader, Communication Services Branch
Office of Pesticide Programs
U.S. Environmental Protection Agency
(703) 305-5642 | han.kaythi@epa.gov

From: Strauss, Linda
Sent: Wednesday, May 15, 2019 9:48 AM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Siedschlag, Gregory <Siedschlag.Gregory@epa.gov>; Dunton, Cheryl <Dunton.Cheryl@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>
Subject: RE: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Thanks!!

From: Keigwin, Richard
Sent: Wednesday, May 15, 2019 5:05 AM
To: Strauss, Linda <Strauss.Linda@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Han, Kaythi <Han.Kaythi@epa.gov>; Siedschlag, Gregory <Siedschlag.Gregory@epa.gov>; Dunton, Cheryl <Dunton.Cheryl@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>
Subject: Re: Charlotte request and question - Fwd: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ex. 5 Deliberative Process (DP)

Rick Keigwin
Director, Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: 703-305-7090
Website: www.epa.gov/pesticides
Sent from my iPhone

On May 14, 2019, at 9:10 PM, Strauss, Linda <Strauss.Linda@epa.gov> wrote:

See below, and thanks in advance!

Sent from my iPhone

Begin forwarded message:

From: "Bertrand, Charlotte" <Bertrand.Charlotte@epa.gov>
Date: May 14, 2019 at 6:31:44 PM EDT
To: "Strauss, Linda" <Strauss.Linda@epa.gov>
Cc: "Dunton, Cheryl" <Dunton.Cheryl@epa.gov>
Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ex. 5 Deliberative Process (DP)

From: Strauss, Linda
Sent: Tuesday, May 14, 2019 6:28 PM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
Cc: Dunton, Cheryl <Dunton.Cheryl@epa.gov>
Subject: Re: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Sent from my iPhone

On May 14, 2019, at 6:04 PM, Bertrand, Charlotte <Bertrand.Charlotte@epa.gov> wrote:

> Looks like AEZ would be at the earliest next week.
>
> ---
>
> **From:** Smith, Peterj
> **Sent:** Tuesday, May 14, 2019 3:53 PM
> **To:** Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
> **Cc:** Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>;

Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>
Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Good afternoon,

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
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****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Beck, Nancy
Sent: Tuesday, May 14, 2019 11:08 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Yes. many thanks to FEAD!

Nancy B. Beck, Ph.D., DABT
Principal Deputy Assistant Administrator, OCSPP
P: 202-564-1273
beck.nancy@epa.gov

From: Smith, Peterj
Sent: Tuesday, May 14, 2019 11:02 AM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Hi Nancy,

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
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****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention

1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 |
email smith.peterj@epa.gov

From: Beck, Nancy
Sent: Monday, May 13, 2019 6:53 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: RE: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ex. 5 Deliberative Process (DP)

Nancy

****
**
Nancy B. Beck, Ph.D., DABT
Principal Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
P: 202-564-1273
beck.nancy@epa.gov

From: Smith, Peterj
Sent: Friday, May 10, 2019 2:53 PM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne

<overstreet.anne@epa.gov>
Subject: REVISED FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Hi Nancy,

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
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****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Beck, Nancy
Sent: Monday, April 29, 2019 10:06 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: RE: FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Nancy B. Beck, Ph.D., DABT
Principal Deputy Assistant Administrator, OCSPP
P: 202-564-1273
beck.nancy@epa.gov

From: Smith, Peterj
Sent: Friday, April 26, 2019 11:28 AM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>; Perlis, Robert <Perlis.Robert@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Kadeli, Lek <Kadeli.Lek@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Keller, Kaitlin <keller.kaitlin@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Overstreet, Anne <overstreet.anne@epa.gov>
Subject: FOR REVIEW AND SIGN-OFF: Draft Responses to Interagency Follow-up Comments on AgWPS/AEZ Amendments

Good morning!

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
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to federal records requirements. Federal employees should evaluate the contents of this message before deleting it.
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

Message

From: Keigwin, Richard [Keigwin.Richard@epa.gov]
Sent: 7/10/2019 2:20:13 PM
To: Yarger, Ryne [Yarger.Ryne@epa.gov]
CC: Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; CWPB [CWPB@epa.gov]; Dinkins, Darlene [Dinkins.Darlene@epa.gov]
Subject: RE: CONFIRMED "NOT SIGNIFICANT": Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Thanks for the update.

From: Yarger, Ryne
Sent: Wednesday, July 10, 2019 10:17 AM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>
Cc: Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; CWPB <CWPB@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>
Subject: FW: CONFIRMED "NOT SIGNIFICANT": Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM
Importance: High

Hi Rick,

Ex. 5 Deliberative Process (DP)

Thanks,
Ryne Yarger
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
703-605-1193

From: Smith, Peterj
Sent: Wednesday, July 10, 2019 9:27 AM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Herndon, George <Herndon.George@epa.gov>; CWPB <CWPB@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Hoyt, Sarita <Hoyt.Sarita@epa.gov>; Chumble, Prasad <Chumble.Prasad@epa.gov>; Smoot, Cameo <Smoot.Cameo@epa.gov>; Hernandez, Connie <Hernandez.Connie@epa.gov>; Siu, Carolyn <siu.carolyn@epa.gov>; Nesci, Kimberly <Nesci.Kimberly@epa.gov>; Kiely, Timothy <Kiely.Timothy@epa.gov>; Wyatt, TJ <Wyatt.Tj@epa.gov>; Berwald, Derek <Berwald.Derek@epa.gov>; Lee, Andrew <Lee.Andrew@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>; Chun, Melissa <Chun.Melissa@epa.gov>; Kaiser, Sven-Erik <Kaiser.Sven-Erik@epa.gov>
Subject: CONFIRMED "NOT SIGNIFICANT": Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM
Importance: High

Good morning!

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
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****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Manibusan, Mary
Sent: Tuesday, July 09, 2019 4:45 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Nickerson, William <Nickerson.William@epa.gov>; Corrales, Mark <Corrales.Mark@epa.gov>; Curry, Bridgid <Curry.Bridgid@epa.gov>; Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Nurse, Leanne <Nurse.Leanne@epa.gov>
Subject: FW: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Ex. 5 Deliberative Process (DP)

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, July 9, 2019 4:41 PM
To: Manibusan, Mary <Manibusan.Mary@epa.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Mary,

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle Y. Jones
(202) 395-1741

From: Manibusan, Mary <Manibusan.Mary@epa.gov>
Sent: Tuesday, July 2, 2019 4:34 PM
To: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Danielle,

Enclosed is a non-significant request for the NPRM, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements". If you have further questions, please let me know.

Thank you so much for this consideration!

Best,
Mary

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Dinkins, Darlene [Dinkins.Darlene@epa.gov]
Sent: 7/24/2019 12:12:55 AM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]
Subject: FW: For review: AEZ comms package
Attachments: DRAFT AEZ OPP Update with Tweets clean.doc; AEZ Communications Plan 7.19.19.docx; AEZ QAs FINAL.docx; Desk Statement on AEZ Proposed Revisions.docx

Here are the comms materials for AEZ. No comments from me.

Darlene Dinkins
Office of Pesticide Programs
U.S. Environmental Protection Agency
(703) 305-5214

From: Siedschlag, Gregory
Sent: Tuesday, July 23, 2019 6:02 PM
To: Dinkins, Darlene <Dinkins.Darlene@epa.gov>
Cc: Borges-Silva, Quentin <Borges-Silva.Quentin@epa.gov>; Naimy, Nina <Naimy.Nina@epa.gov>
Subject: For review: AEZ comms package

Hi Darlene,

Here are our comms for the AEZ rule. OCSPP would like this tomorrow, if possible.

Best,

Greg Siedschlag
Chief, Communication Services Branch
Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: (703) 603-9044
Cell: (571) 255-0284
https://www.epa.gov/pesticides

Message

From: Yarger, Ryne [Yarger.Ryne@epa.gov]
Sent: 7/10/2019 2:16:46 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]
CC: Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; CWPB [CWPB@epa.gov]; Dinkins, Darlene [Dinkins.Darlene@epa.gov]
Subject: FW: CONFIRMED "NOT SIGNIFICANT": Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Importance: High

Hi Rick,

Ex. 5 Deliberative Process (DP)

Thanks,
Ryne Yarger
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
703-605-1193

From: Smith, Peterj
Sent: Wednesday, July 10, 2019 9:27 AM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Herndon, George <Herndon.George@epa.gov>; CWPB <CWPB@epa.gov>
Cc: Sisco, Debby <Sisco.Debby@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Hoyt, Sarita <Hoyt.Sarita@epa.gov>; Chumble, Prasad <Chumble.Prasad@epa.gov>; Smoot, Cameo <Smoot.Cameo@epa.gov>; Hernandez, Connie <Hernandez.Connie@epa.gov>; Siu, Carolyn <siu.carolyn@epa.gov>; Nesci, Kimberly <Nesci.Kimberly@epa.gov>; Kiely, Timothy <Kiely.Timothy@epa.gov>; Wyatt, TJ <Wyatt.Tj@epa.gov>; Berwald, Derek <Berwald.Derek@epa.gov>; Lee, Andrew <Lee.Andrew@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>; Chun, Melissa <Chun.Melissa@epa.gov>; Kaiser, Sven-Erik <Kaiser.Sven-Erik@epa.gov>
Subject: CONFIRMED "NOT SIGNIFICANT": Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM
Importance: High

Good morning!

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
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to federal records requirements. Federal employees should evaluate the contents of this message before deleting it.
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Manibusan, Mary
Sent: Tuesday, July 09, 2019 4:45 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Nickerson, William <Nickerson.William@epa.gov>; Corrales, Mark <Corrales.Mark@epa.gov>; Curry, Bridgid <Curry.Bridgid@epa.gov>; Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Nurse, Leanne <Nurse.Leanne@epa.gov>
Subject: FW: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Ex. 5 Deliberative Process (DP)

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, July 9, 2019 4:41 PM
To: Manibusan, Mary <Manibusan.Mary@epa.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Mary,

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle Y. Jones
(202) 395-1741

From: Manibusan, Mary <Manibusan.Mary@epa.gov>
Sent: Tuesday, July 2, 2019 4:34 PM
To: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Danielle,

Enclosed is a non-significant request for the NPRM, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements". If you have further questions, please let me know.

Thank you so much for this consideration!

Best,
Mary

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 7/10/2019 1:26:51 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Herndon, George [Herndon.George@epa.gov]; CWPB [CWPB@epa.gov]
CC: Sisco, Debby [Sisco.Debby@epa.gov]; Dinkins, Darlene [Dinkins.Darlene@epa.gov]; Hoyt, Sarita [Hoyt.Sarita@epa.gov]; Chumble, Prasad [Chumble.Prasad@epa.gov]; Smoot, Cameo [Smoot.Cameo@epa.gov]; Hernandez, Connie [Hernandez.Connie@epa.gov]; Siu, Carolyn [siu.carolyn@epa.gov]; Nesci, Kimberly [Nesci.Kimberly@epa.gov]; Kiely, Timothy [Kiely.Timothy@epa.gov]; Wyatt, TJ [Wyatt.Tj@epa.gov]; Berwald, Derek [Berwald.Derek@epa.gov]; Lee, Andrew [Lee.Andrew@epa.gov]; Garrison, Scott [Garrison.Scott@epa.gov]; Chun, Melissa [Chun.Melissa@epa.gov]; Kaiser, Sven-Erik [Kaiser.Sven-Erik@epa.gov]
Subject: CONFIRMED "NOT SIGNIFICANT": Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Importance: High

Good morning!

Ex. 5 Deliberative Process (DP)

Best,
Peter

****
NOTICE: *If this electronic communication explains, justifies, or documents an official action or decision, it may be subject to federal records requirements. Federal employees should evaluate the contents of this message before deleting it.*
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

From: Manibusan, Mary
Sent: Tuesday, July 09, 2019 4:45 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Nickerson, William <Nickerson.William@epa.gov>; Corrales, Mark <Corrales.Mark@epa.gov>; Curry, Bridgid <Curry.Bridgid@epa.gov>; Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Nurse, Leanne <Nurse.Leanne@epa.gov>
Subject: FW: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Ex. 5 Deliberative Process (DP)

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, July 9, 2019 4:41 PM
To: Manibusan, Mary <Manibusan.Mary@epa.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: RE: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Mary,

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle Y. Jones
(202) 395-1741

From: Manibusan, Mary <Manibusan.Mary@epa.gov>
Sent: Tuesday, July 2, 2019 4:34 PM
To: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Cc: Adams, Darryl <Adams.Darryl@epa.gov>
Subject: Non-Significance OMB Determination Request: Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements; NPRM

Hi Danielle,

Enclosed is a non-significant request for the NPRM, "Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements". If you have further questions, please let me know.

Thank you so much for this consideration!

Best,
Mary

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Garrison, Scott [Garrison.Scott@epa.gov]
Sent: 8/13/2019 6:07:02 PM
To: Sisco, Debby [Sisco.Debby@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]
CC: Perlis, Robert [Perlis.Robert@epa.gov]
Subject: RE: wps AEZ
Attachments: WPS AEZ Senate hearing ry.qb2-2013-08-13.sbg.doc

Confidential communication for internal deliberations only. Attorney-client privilege. Do not distribute outside EPA.

Ex. 5 Attorney Client (AC)

Scott Garrison
Pesticides and Toxic Substances Law Office (2333A)
Office of General Counsel
U.S. Environmental Protection Agency
202-564-4047
garrison.scott@epa.gov

From: Perlis, Robert <Perlis.Robert@epa.gov>
Sent: Tuesday, August 13, 2019 12:23 PM
To: Garrison, Scott <Garrison.Scott@epa.gov>
Subject: FW: wps AEZ

Can you get comments back to Debby Sisco as soon as you can? Thanks…

Bob Perlis
Pesticides and Toxic Substances Law Office
Office of General Counsel
US EPA
(202) 564-5636

From: Sisco, Debby <Sisco.Debby@epa.gov>
Sent: Tuesday, August 13, 2019 12:21 PM
To: Perlis, Robert <Perlis.Robert@epa.gov>
Cc: Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Sisco, Debby <Sisco.Debby@epa.gov>
Subject: wps AEZ

Ex. 5 Deliberative Process (DP)

Debby Sieco
Ethics Officer and Special Assistant to the Director
Office of Pesticide Programs (7501P)
US Environmental Protection Agency
4th floor - 4241 Potomac Yard South
(office: 703 308-8121; Ex. 6 Personal Privacy (PP)

Message

From: Sisco, Debby [Sisco.Debby@epa.gov]
Sent: 8/13/2019 4:21:11 PM
To: Perlis, Robert [Perlis.Robert@epa.gov]
CC: Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Sisco, Debby [Sisco.Debby@epa.gov]
Subject: wps AEZ
Attachments: WPS AEZ Senate hearing ry.qb2-2013-08-13.doc

Ex. 5 Deliberative Process (DP)

Debby Sisco
Ethics Officer and Special Assistant to the Director
Office of Pesticide Programs (7501P)
US Environmental Protection Agency
4th floor - 4241 Potomac Yard South
(office: 703 308-8121; Ex. 6 Personal Privacy (PP)

Message

From: Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]
Sent: 7/3/2019 7:36:46 PM
To: Moore, Deon [Moore.Deon@epa.gov]
CC: Lloyd, Matthew [Lloyd.Matthew@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Katz, Brian [Katz.Brian@epa.gov]; Layne, Arnold [Layne.Arnold@epa.gov]
Subject: FW: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004
Attachments: DRAFT RFA- EPA_HQ-OPP-2019-004_ farmworker training program.arl.06.18.19.docx; Draft Transmittal Note for SRO File_EPA-HQ-OPP-2019-004_RFA 6.03.19.docx; QARF-NFTP.RFA.signed.docx.pdf; PO Milestones AFOP RFA 06.27.19..pdf; Buck slip for routing NFPT_ RFA_EPA-HQ-OPP-2019-004 JK_JM_VW BK 7-03-19_djb_wfm _EM.pdf; EPA-HQ-OPP-2019-004 MEMO to SRO_ver2.docx

Hi Deon,

Attached is the complete RFA package with the revised routing slip (buck slip) and memo including AA approval. Please e-sign the routing buck slip and forward to the SRO.

Happy 4th!

Thanks,
Ana

Ana Rivera-Lupiáñez
Pesticide Worker Safety Programs
Office of Pesticide Programs
Environmental Protection Agency
rivera-lupianez.ana@epa.gov
(703) 308-6841

From: Rivera-Lupianez, Ana
Sent: Thursday, June 27, 2019 2:41 PM
To: Moore, Deon <Moore.Deon@epa.gov>
Cc: Williams, Venese <Williams.Venese@epa.gov>; Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>; Katz, Brian <Katz.Brian@epa.gov>; Jackie Mosby (Mosby.Jackie@epa.gov) <Mosby.Jackie@epa.gov>
Subject: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004

Hi Deon,

Attached is a copy of the new National Farmworker Training Program RFA (EPA-HQ-OPP-2019-004) for your review. We are hoping to publish the solicitation by August 1st, 2019. All supporting documents are attached. Once you complete your review (and any comments are addressed), please e-sign the buck slip and forward to the SRO (Arnold Layne) for decision memorandum approval and return to me. Please let us know if you have any questions.

Thanks,
Ana

Ana Rivera-Lupiáñez
Pesticide Worker Safety Programs
Office of Pesticide Programs
Environmental Protection Agency

rivera-lupianez.ana@epa.gov
(703) 308-6841

From: Rivera-Lupianez, Ana
Sent: Thursday, June 27, 2019 1:08 PM
To: Messina, Edward <Messina.Edward@epa.gov>
Cc: Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>; Williams, Venese <Williams.Venese@epa.gov>
Subject: RE: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004

Thanks Ed,

No worries, I added a text box with today's date (see attached). The documents are now ready for OCSPP approvals.

Thanks,
Ana

Ana Rivera-Lupiáñez
Pesticide Worker Safety Programs
Office of Pesticide Programs
Environmental Protection Agency
rivera-lupianez.ana@epa.gov
(703) 308-6841

From: Messina, Edward
Sent: Thursday, June 27, 2019 12:56 PM
To: Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>
Cc: Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>; Williams, Venese <Williams.Venese@epa.gov>
Subject: RE: For your review: National Farmworker Training Program RFA EPA-HQ-OPP-2019-004

Looks good. I figured out how to sign. How do I put a date in?

Ed Messina
Deputy Office Director (Programs)
Office of Pesticide Programs
U.S. EPA
(703) 347-0209

Select an Option

ROUTING AND APPROVAL FORM

Date

June 5, 2019

TO: *(Name, office symbol, room number, building, Agency/Post)*	Initials	Date
1. Jeanne Kasai, CWPB, Team lead	JHK	June 5, 2019
2. Jackie Mosby, FEAD, Division Director	JEM	**June 11, 2019**
3. Venese Williams, OPP, Grants Coordinator	Venese Williams	June 18, 2019
4. Brian Katz, ITRMD, Supervisory Program Analyst	Brian Katz	June 18, 2019
5. Delores Barber, ITRMD, Director	Delores Barber	June 25, 2019
6. Wynne Miller, OPP, Acting Deputy Director	Wynne Miller	June 27, 2019
7. Edward Messina, OPP, Deputy Director	Edward J Messina	June 27, 2019
8. Deon Moore, OCSPP JRO		
9. Arnold Layne, OCSPP SRO		
10. Alexandra Dunn, OCSPP, AA		

☐	Action	☐	File	☐	Note and Return
☐	Approval	☐	For Clearance	☐	Per Conversation
☐	As Requested	☐	For Correction	☐	Prepare Reply
☐	Circulate	☐	For Your Information	☐	See Me
☐	Comment	☐	Investigate	☐	Signature
☐	Coordination	☐	Justify		

REMARKS

Please review, comment and sign-off on this request for applications (RFA) for a new National Farmworker Training Program (NFTP) cooperative agreement.

The existing National Farmworker Training agreement with Association of Farmworker Opportunity Programs expires in September 2020. There are many steps to take before the RFA can be posted in Grants.gov for competition.

It is important to continue a strong pesticide safety program which includes training and education aimed at reducing exposure to pesticides for agricultural workers, their families and the agricultural community at large.

Thank you!

FROM: *(Name, org. symbol, Agency/Post)*	Room No. – Bldg.
Ana Rivera-Lupianez (Delegate Jeanne Kasai)	S7346
	Phone No. (703) 308-6841

ORD OF - 41

(Rev. 5-14) (WebForms v3.7)

Audit Trail for

ORD Routing and Approval Form

PDF Name: ORDOF41.pdf
Form Number: ORD-OF41
Document Identifier: ORD-OF41-17075113749-JK

Message

From: Keigwin, Richard [Keigwin.Richard@epa.gov]
Sent: 7/3/2019 9:02:22 AM
To: Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]
CC: Mosby, Jackie [Mosby.Jackie@epa.gov]; Nesci, Kimberly [Nesci.Kimberly@epa.gov]
Subject: Fwd: SAN 6331.1: OMB Determination Request for Revised AEZ/WPS NPRM - Per Request
Attachments: EO-Determination1-pager_Generated from ADP Tracker_AEZ-Revised-NPRM.docx; ATT00001.htm

FYI

Rick Keigwin
Director, Office of Pesticide Programs
U.S. Environmental Protection Agency
Phone: 703-305-7090
Website: www.epa.gov/pesticides
Sent from my iPhone

Begin forwarded message:

From: "Hofmann, Angela" <Hofmann.Angela@epa.gov>
Date: July 2, 2019 at 4:21:23 PM EDT
To: "Manibusan, Mary" <Manibusan.Mary@epa.gov>, "Nurse, Leanne" <Nurse.Leanne@epa.gov>
Cc: "Chun, Melissa" <Chun.Melissa@epa.gov>, "Smith, Peterj" <Smith.Peterj@epa.gov>, "Nickerson, William" <Nickerson.William@epa.gov>, "Bertrand, Charlotte" <Bertrand.Charlotte@epa.gov>, "Kadeli, Lek" <Kadeli.Lek@epa.gov>, "Layne, Arnold" <Layne.Arnold@epa.gov>, "Keigwin, Richard" <Keigwin.Richard@epa.gov>, "Yarger, Ryne" <Yarger.Ryne@epa.gov>, "Mosby, Jackie" <Mosby.Jackie@epa.gov>
Subject: SAN 6331.1: OMB Determination Request for Revised AEZ/WPS NPRM - Per Request

Hi Mary,

Ex. 5 Deliberative Process (DP)

- Angela

Angela Hofmann
Director of Regulatory and Information Coordination
Office of Program Management and Operations
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency (EPA)

Mailing Address: Mailcode 7101M - 1200 Pennsylvania Ave., N.W., Washington, DC 20460
Office Location: William Jefferson Clinton Building, East Room 3139L
Phone: 202-564-0258

Message

From: Yarger, Ryne [Yarger.Ryne@epa.gov]
Sent: 6/11/2019 6:47:13 PM
To: Smith, Peterj [Smith.Peterj@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]
CC: CWPB [CWPB@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Garrison, Scott [Garrison.Scott@epa.gov]; Herndon, George [Herndon.George@epa.gov]
Subject: RE: Peter - here it is
Attachments: MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-06-03-tfc_EPA.docx

Ex. 5 Deliberative Process (DP)

Thanks,
Ryne Yarger
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
703-605-1193

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

From: Smith, Peterj
Sent: Tuesday, June 11, 2019 12:40 PM

To: Kasai, Jeanne <Kasai.Jeanne@epa.gov>
Cc: CWPB <CWPB@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>; Herndon, George <Herndon.George@epa.gov>
Subject: RE: Peter - here it is

Jeanne/Ryne,

Please call me ASAP. Thanks!

From: Kasai, Jeanne
Sent: Tuesday, June 11, 2019 12:25 PM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: CWPB <CWPB@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>; Herndon, George <Herndon.George@epa.gov>
Subject: Peter - here it is
Importance: High

Hi Peter -

See below in blue font. Also in document that ends with "EPA".
Thanks to Ryne for his help on this.

Thanks, Peter!

Jeanne

Ex. 5 Deliberative Process (DP)

Jeanne Kasai, USEPA
Office of Pesticide Programs, Certification & Worker Protection Branch
tel. 703-308-3240, kasai.jeanne@epa.gov
http://www.epa.gov/pesticide-worker-safety

From: Smith, Peterj
Sent: Tuesday, June 11, 2019 11:11 AM
To: Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>; Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Park, Jennifer <park.jennifer@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>; Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>; Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: USDA COMMENTS: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Importance: High

Just received via OMB.

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, June 11, 2019 11:08 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Peter,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 6/11/2019 4:25:03 PM
To: Smith, Peterj [Smith.Peterj@epa.gov]
CC: CWPB [CWPB@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Garrison, Scott [Garrison.Scott@epa.gov]; Herndon, George [Herndon.George@epa.gov]
Subject: Peter - here it is
Attachments: MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-06-03-tfc.docx; MARKUP_RIN2070-AK49_EO12866_AgWPS-AEZ_NPRM_FRdocument_2019-06-03-tfc_EPA.docx

Importance: High

Hi Peter -

See below in blue font. Also in document that ends with "EPA".
Thanks to Ryne for his help on this.

Thanks, Peter!

Jeanne

Ex. 5 Deliberative Process (DP)

Jeanne Kasai, USEPA
Office of Pesticide Programs, Certification & Worker Protection Branch
tel. 703-308-3240, kasai.jeanne@epa.gov
http://www.epa.gov/pesticide-worker-safety
United States Environmental Protection Agency

From: Smith, Peterj
Sent: Tuesday, June 11, 2019 11:11 AM
To: Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>; Lloyd, Matthew <Lloyd.Matthew@epa.gov>; Park, Jennifer <park.jennifer@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>; Rivera-Lupianez, Ana <Rivera-Lupianez.Ana@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Herndon, George <Herndon.George@epa.gov>; Garrison, Scott <Garrison.Scott@epa.gov>; Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Keigwin, Richard <Keigwin.Richard@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>
Subject: USDA COMMENTS: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)
Importance: High

Just received via OMB.

From: Jones, Danielle Y. EOP/OMB <Danielle_Y_Jones@omb.eop.gov>
Sent: Tuesday, June 11, 2019 11:08 AM
To: Smith, Peterj <Smith.Peterj@epa.gov>
Cc: Gilbreath, Jan <Gilbreath.Jan@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>

Subject: EO 12866 Interagency Review: EPA's Pesticides; Agricultural Worker Protection Standard; Revision of the Application Exclusion Zone Requirements (RIN 2070-AK49)

Hi Peter,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks,
Danielle

Danielle Y. Jones
Senior Policy Analyst
Office of Management and Budget | Office of Information and Regulatory Affairs
Phone: (202) 395-1741 | djones@omb.eop.gov

Message

From: Keigwin, Richard [Keigwin.Richard@epa.gov]
Sent: 2/6/2019 10:59:51 AM
To: Overstreet, Anne [overstreet.anne@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]
CC: Parrott, Patricia [parrott.patricia@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Lantz, Tracy [Lantz.Tracy@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]
Subject: RE: WPS AEZ Draft Documents For Your Review
Attachments: DRAFT TRACK CHANGES_ AgWPS-Reconsideration_NPRM_FRdocument_AEZandMinorCorrections_Only_2019-02-05_wfm RPK.docx

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

From: Overstreet, Anne
Sent: Tuesday, February 05, 2019 2:37 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>
Cc: Parrott, Patricia <parrott.patricia@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>
Subject: WPS AEZ Draft Documents For Your Review
Importance: High

Ex. 5 Deliberative Process (DP)

Anne

Anne Overstreet, Chief
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs (7510P)
U.S. Environmental Protection Agency
(703) 308-8068
Overstreet.anne@epa.gov
http://www.epa.gov/pesticides

Message

From: Miller, Wynne [Miller.Wynne@epa.gov]
Sent: 2/6/2019 2:11:12 AM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]
CC: Messina, Edward [Messina.Edward@epa.gov]
Subject: FW: WPS AEZ Draft Documents For Your Review
Attachments: DRAFT TRACK CHANGES_ AgWPS-Reconsideration_NPRM_FRdocument_AEZandMinorCorrections_Only_2019-02-05_wfm.docx; Cost Analysis AEZ 2019 02 05_wfm.docx

Importance: High

Hi Rick,

Ex. 5 Deliberative Process (DP)

Wynne

From: Overstreet, Anne
Sent: Tuesday, February 05, 2019 2:37 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>
Cc: Parrott, Patricia <parrott.patricia@epa.gov>; Kasai, Jeanne <Kasai.Jeanne@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Lantz, Tracy <Lantz.Tracy@epa.gov>; Pont, Richard <Pont.Richard@epa.gov>
Subject: WPS AEZ Draft Documents For Your Review
Importance: High

Ex. 5 Deliberative Process (DP)

Anne

Anne Overstreet, Chief
Certification and Worker Protection Branch
Field and External Affairs Division
Office of Pesticide Programs (7510P)
U.S. Environmental Protection Agency
(703) 308-8068
Overstreet.anne@epa.gov
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Message

From: Overstreet, Anne [overstreet.anne@epa.gov]
Sent: 2/5/2019 7:37:02 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]
CC: Parrott, Patricia [parrott.patricia@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Lantz, Tracy [Lantz.Tracy@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]
Subject: WPS AEZ Draft Documents For Your Review
Attachments: DRAFT TRACK CHANGES_ AgWPS-Reconsideration_NPRM_FRdocument_AEZandMinorCorrections_Only_2019-02-05.docx; DRAFT CLEAN_ AgWPS-Reconsideration_NPRM_FRdocument_AEZandMinorCorrections_Only_2019-02-05.docx; Cost Analysis AEZ 2019 02 05.docx

Importance: High

Ex. 5 Deliberative Process (DP)

Anne

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U.S. Environmental Protection Agency
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Overstreet.anne@epa.gov
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Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 2/7/2019 8:42:49 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]
CC: Overstreet, Anne [overstreet.anne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Berwald, Derek [Berwald.Derek@epa.gov]
Subject: NOTE ON DRAFT WPS AEZ NPRM
Attachments: Draft AgWPS-Revision_NPRM_FRdocument_AEZ 2.7.19.docx; DRAFT Track Changes_AgWPS-Revision_NPRM_FRdocument_AEZ 2.7.19.docx; Cost Analysis AEZ 2019 02 07.docx; OMB Comments on WPS NPRM_Response_DRAFT Revised 2.7.19.docx

Hi –

Ex. 5 Deliberative Process (DP)

From: Kasai, Jeanne
Sent: Thursday, February 07, 2019 3:01 PM
To: Keigwin, Richard <Keigwin.Richard@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>
Cc: Overstreet, Anne <overstreet.anne@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>; Parrott, Patricia <parrott.patricia@epa.gov>; Yarger, Ryne <Yarger.Ryne@epa.gov>; Berwald, Derek <Berwald.Derek@epa.gov>
Subject: DRAFT WPS AEZ NPRM

Hi Rick –

Anne Overstreet is okay with this and asked me to send it to you.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks!
Jeanne

Jeanne Kasai, USEPA
Office of Pesticide Programs, Certification & Worker Protection Branch
tel. 703-308-3240, kasai.jeanne@epa.gov
http://www.epa.gov/pesticide-worker-safety

Message

From: Kasai, Jeanne [Kasai.Jeanne@epa.gov]
Sent: 2/7/2019 8:00:58 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]
CC: Overstreet, Anne [overstreet.anne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Berwald, Derek [Berwald.Derek@epa.gov]
Subject: DRAFT WPS AEZ NPRM
Attachments: Draft AgWPS-Revision_NPRM_FRdocument_AEZ 2.7.19.docx; DRAFT Track Changes_AgWPS-Revision_NPRM_FRdocument_AEZ 2.7.19.docx; Cost Analysis AEZ 2019 02 07.docx; OMB Comments on WPS NPRM_Response_DRAFT Revised 2.7.19.docx

Hi Rick –

Anne Overstreet is okay with this and asked me to send it to you.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks!
Jeanne

Jeanne Kasai, USEPA
Office of Pesticide Programs, Certification & Worker Protection Branch
tel. 703-308-3240, kasai.jeanne@epa.gov

Message

From: Miller, Wynne [Miller.Wynne@epa.gov]
Sent: 2/6/2019 10:42:32 PM
To: Kiely, Timothy [Kiely.Timothy@epa.gov]; Overstreet, Anne [overstreet.anne@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Herndon, George [Herndon.George@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Berwald, Derek [Berwald.Derek@epa.gov]
CC: Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]
Subject: FW: Responses to Interagency Comments on WPS NPRM, Certification rule NPRM and Cost Analysis
Attachments: OMB Comments on WPS NPRM_Response_DRAFT 8 8 18.docx; OMB comments on certification NPRM_Response_DRAFT 8 8 18.docx; BEAD Response to Comments on Cost Analysis for Review 2018 08 08.docx; BEAD Response to Comments on Cost Analysis for Review 2018 08 09 Clean.docx

Hi All,

Ex. 5 Deliberative Process (DP)

Wynne

From: Tyree, JamesN
Sent: Wednesday, February 06, 2019 4:43 PM
To: Miller, Wynne <Miller.Wynne@epa.gov>
Subject: FW: Responses to Interagency Comments on WPS NPRM, Certification rule NPRM and Cost Analysis

Hi,
Here are the latest RtC from last August….

James

From: Keller, Kaitlin
Sent: Wednesday, February 06, 2019 2:12 PM
To: Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: FW: Responses to Interagency Comments on WPS NPRM, Certification rule NPRM and Cost Analysis

And the NPRM.

From: Keigwin, Richard
Sent: Wednesday, August 08, 2018 1:42 PM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>
Cc: Keller, Kaitlin <keller.kaitlin@epa.gov>; Messina, Edward <Messina.Edward@epa.gov>; Dinkins, Darlene <Dinkins.Darlene@epa.gov>; Mosby, Jackie <Mosby.Jackie@epa.gov>
Subject: FW: Responses to Interagency Comments on WPS NPRM, Certification rule NPRM and Cost Analysis

For the 9:30am discussion tomorrow (Thursday, 8/8).

Ex. 5 Deliberative Process (DP)