U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF INSPECTOR GENERAL

Ensuring the safety of chemicals
Compliance with the law

EPA Needs to Evaluate the Impact of the Revised Agricultural Worker Protection Standard on Pesticide Exposure Incidents

Report No. 18-P-0080 **February 15, 2018**

Report Contributors:

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Abbreviations

CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
IDS	Incident Data System
NASDA	National Association of State Departments of Agriculture
OCSPP	Office of Chemical Safety and Pollution Prevention
OECA	Office of Enforcement and Compliance Assurance
OIG	Office of Inspector General
OPP	Office of Pesticide Programs
PERC	Pesticide Educational Resources Collaborative
SENSOR	Sentinel Event Notification System for Occupational Risk
WPS	Worker Protection Standard

Cover photo: Pesticide handler spraying a pesticide. (EPA photo)

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U.S. Environmental Protection Agency
Office of Inspector General

18-P-0080
February 15, 2018

At a Glance

Why We Did This Review

We conducted this evaluation to determine the adequacy of the U.S. Environmental Protection Agency's (EPA's) management controls for implementing the revised Federal Insecticide, Fungicide, and Rodenticide Act Agricultural Worker Protection Standard (WPS) requirements. We focused on training resources, educational materials and outreach efforts. We also looked at how the agency plans to collect and utilize WPS compliance and enforcement information to track pesticide exposures among target populations.

The WPS is intended to reduce pesticide exposure incidents among agricultural farmworkers and pesticide handlers who use and have contact with pesticides. The EPA established the WPS in 1974, expanded it in 1992, and revised the standard in late 2015. Compliance with most of the 2015 revisions was required on January 2, 2017; and the final three revisions on January 2, 2018.

This report addresses the following:

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What We Found

The EPA had policies and procedures in place to implement the revised Agricultural WPS. Further, the agency provided training to regional staff, state inspectors and program leads. However, we found that management controls to implement the revised WPS were not fully adequate as of January 2, 2017, when compliance with most of the revised rule was required.

Over 2 million agricultural workers and pesticide handlers are protected by the WPS. Revisions to the standard are intended to reduce exposure to pesticides and provide enhanced protection to agricultural workers, pesticide handlers and their families.

Essential training and implementation materials were not available by January 2, 2017. In addition, two key documents—the *WPS Inspection Manual* and the *How to Comply* manual—were not available when the EPA conducted the majority of its training and outreach activities for states and tribes in 2016. As a result, many state officials said they did not have the time, tools or resources to successfully implement the revised WPS by the January 2, 2017, compliance date. EPA granted a state agricultural association's petition to delay the compliance date until the necessary training resources and educational materials were made available to state agencies responsible for implementing the WPS. However, in a December 21, 2017, Federal Register notice, the EPA rescinded its plan to delay compliance dates. The agency announced that compliance dates in the revised WPS published on November 2, 2015, remain in effect and that the agency does not intend to extend them. The EPA also announced plans to revise certain WPS requirements.

The EPA does not have the ability to collect agricultural pesticide exposure incident data to measure the impact of the revised WPS rule among target populations. The agency relies on information assessed during pesticide re-evaluations and from voluntary reporting databases. The EPA is working on improving its Incident Data System, but the agency stated that the improvements will not enable the collection of additional occupational exposure data.

Recommendation and Planned Agency Corrective Actions

We initially recommended that the EPA establish new compliance dates for the revised WPS. However, based on the EPA's December 2017 decision to revert back to the original compliance dates, we rescinded the recommendation. We still recommend that the agency develop a methodology to evaluate the impact of the revised standard on pesticide exposure incidents among the WPS target populations. The agency disagreed with this recommendation, and resolution efforts are in progress.

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

THE INSPECTOR GENERAL

February 15, 2018

MEMORANDUM

SUBJECT: EPA Needs to Evaluate the Impact of the Revised Agricultural Worker Protection Standard on Pesticide Exposure Incidents
Report No. 18-P-0080

FROM: Arthur A. Elkins Jr.

TO: Charlotte Bertrand, Acting Principal Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention

Susan Bodine, Assistant Administrator
Office of Enforcement and Compliance Assurance

This is our report on the subject review conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). The project number for this review was OPE-FY17-0008. This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. This report represents the opinion of the OIG and does not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

Action Required

In accordance with EPA Manual 2750, within 30 days, the OIG will meet with the Office of Chemical Safety and Pollution Prevention, and the Office of Enforcement and Compliance Assurance, to discuss the unresolved recommendation. Final decisions on the unresolved recommendation will be posted on the OIG's website following the resolution process in EPA Manual 2750.

We will post this report to our website at www.epa.gov/oig.

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Chapter 1
Introduction

Purpose

We conducted this evaluation to determine the adequacy of the U.S. Environmental Protection Agency's (EPA's) management controls for implementing the revised Agricultural Worker Protection Standard (WPS) requirements. Our objectives were to determine the following:

- Whether Office of Pesticide Programs (OPP) and Office of Enforcement and Compliance Assurance (OECA) processes and procedures were adequate to implement the revised Agricultural WPS.
- How the agency plans to collect and utilize the revised Agricultural WPS compliance and enforcement information to track pesticide exposure among target populations.

Background

Revised WPS

The EPA originally promulgated the WPS in 1974 under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and significantly expanded the WPS in 1992. On November 2, 2015, the EPA issued a final rule that further revised the WPS. The 2015 rule required agricultural establishments that employ farmworkers and pesticide handlers to comply with most of the requirements by January 2, 2017; however, three revisions that necessitated specialized training were not effective until January 2, 2018.[1]

The primary objective of the WPS is to reduce the risk of injury or illness resulting from agricultural farmworkers' and pesticide handlers' use of and contact with pesticides on farms, forests, nurseries and greenhouses. By better protecting agricultural workers and pesticide handlers, the agency anticipates fewer pesticide exposure incidents among farmworkers, handlers and their family members. Fewer incidents mean reduced exposure to pesticides that may contribute to

WPS Target Populations

The WPS primarily seeks to protect two occupational groups:

- *Agricultural workers.* Those who perform hand-labor tasks in pesticide-treated crops, such as harvesting, thinning and pruning.
- *Pesticide handlers.* Those who mix, load and apply pesticides.

[1] Federal regulations at 40 CFR Part 170 provide details on WPS requirements, including effective and compliance dates.

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chronic illness and, therefore, a healthier workforce, which helps avoid lost wages and medical bills. The WPS is expected to protect more than 2 million agricultural workers and pesticide handlers who work on 600,000 agricultural establishments.

Based on an analysis of occupational pesticide incidents reported to the National Institute for Occupational Safety and Health, there are an estimated 1,810 to 2,950 pesticide incidents annually on agricultural establishments covered by the WPS that could be prevented by the WPS revisions.

EPA and State Management of WPS

OPP, within the Office of Chemical Safety and Pollution Prevention (OCSPP), and OECA work in collaboration with the states, tribes and territories to manage enforcement of and compliance with FIFRA, including the WPS. In February 2017, these two EPA offices issued a joint guidance document, *2018–2021 FIFRA Cooperative Agreement Guidance,* that defines the roles of EPA offices, states, tribes and territories regarding pesticide-related programmatic, compliance assistance and enforcement activities. According to this guidance document, OPP provides funding to support "education, outreach, training, technical assistance and evaluation activities" for pesticide program development and implementation.

Requests to Delay WPS Implementation

On December 21, 2016, the National Association of State Departments of Agriculture (NASDA) and the American Farm Bureau Federation submitted a petition to delay implementation for all revisions of the WPS until at least January 2, 2018. The EPA denied this petition on January 13, 2017.

NASDA submitted a subsequent petition on February 21, 2017, to formally request the extension of all the revised WPS requirements:

> … until at least January 2, 2018 or until adequate enforcement guidance, educational materials, and training resources have been completed and the state lead agencies have the tools, time, and resources necessary to effectively implement the rule changes and assist the regulated community with compliance activities.

On May 11, 2017, the agency announced it would grant NASDA's petition to extend the implementation date of all revised WPS requirements "until the necessary guidance and training have been completed which would allow state lead pesticide agencies to successfully implement the rule changes."

However, EPA reversed this decision and announced in a December 21, 2017, Federal Register notice that the compliance dates in the November 2, 2015, rule remain in effect and that the agency does not intent to extend them. Additionally, the EPA announced that it has initiated a rulemaking process to revise certain

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requirements in the Agricultural WPS. The notice stated that the only requirements in the revised WPS that will not be in effect as of January 2, 2018, are the requirements that the worker and handler pesticide safety training material cover the expanded content at 40 CFR 170.401(c)(3) and 170.501(c)(3).

Request to Collect Pesticide Exposure Incident Data

The EPA does not have a comprehensive database that maintains national pesticide incident data. On November 29, 2016, the EPA Administrator received a petition for rulemaking from 80 nongovernmental organizations to encourage the agency to improve its incident data collection. Although registrants are required to report incidents under FIFRA Section (6)(a)(2),[2] the petitioners argued that this reporting scheme is ineffective because of high reporting triggers and thresholds, reporting mechanisms that are not user-friendly, minimal public access, and lack of coordination with other federal agencies.

The EPA does have access to some sources of incident data collected by the National Institute for Occupational Safety and Health's Sentinel Event Notification System for Occupational Risk (SENSOR) Pesticide Program[3] and the National Pesticide Information Center.

Responsible Offices

OPP (within OCSPP) and OECA have the primary responsibility for subjects in this review.

Scope and Methodology

We conducted our work from March through September 2017. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We met with key OPP and OECA staff to identify the processes and procedures the EPA had in place to implement the revised WPS and to determine whether the agency could collect pesticide exposure incident data. We judgmentally selected regions; interviewed regional staff implementing the revised WPS in Regions 4, 5, 7 and 9; and interviewed state program leads in California, Minnesota and North Carolina. We also interviewed the following stakeholders about their perspectives on

[2] FIFRA Section (6)(a)(2) states, "If at any time after the registration of a pesticide the registrant has additional factual information regarding unreasonable adverse effects on the environment of the pesticide, the registrant shall submit such information to the Administrator."
[3] SENSOR-Pesticides is a surveillance program that monitors occupational illnesses related to pesticide exposure.

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the WPS and the adequacy of the agency's implementation of the revised rule: Farmworker Justice, Migrant Clinicians Network, National Institute for Occupational Safety and Health, and Pesticide Educational Resources Collaborative (PERC).

We reviewed whether OPP's and OECA's management controls were adequate to implement the revised WPS. The team assessed adequacy of implementation based on whether (1) training and training resources[4] were provided to regional staff, state inspectors and program leads in advance of the January 2, 2017, compliance date; (2) outreach efforts were conducted with stakeholders on the WPS revision and implementation timeline; and (3) WPS education materials[5] were updated to incorporate revisions. Additionally, we reviewed the following guidance documents, policies and procedures, other documents, and online sources:

- Title 40 CFR Part 170, Worker Protection Standard.
- Federal Insecticide, Fungicide, and Rodenticide Act.
- U.S. Government Accountability Office, *Standards for Internal Control in the Federal Government*, GAO-14-704G, September 2014.
- Office of Management and Budget Circular A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control.*
- The EPA's *Economic Analysis of the Agricultural Worker Protection Standard Revisions*, RIN 2070-AJ22 Docket: EPA-HQ-OPP-2011-0184, November 2015.
- EPA, *2015–2017 FIFRA Cooperative Agreement Guidance*, March 6, 2014.
- EPA, *2018–2021 FIFRA Cooperative Agreement Guidance*, February 14, 2017.
- EPA, *Quality Policy*, CIO 2106.0, October 2008.
- OPP and OECA documents and activities, including 11 strategic planning documents, 24 educational resources, 64 training resources, and regional and state training dates and outreach to stakeholders.
- The EPA's public website on the revised WPS and the PERC public website.

[4] According to OPP, training resources are materials that were provided during training sessions with regions, states and stakeholders but are not financial resources that would be used to conduct training.
[5] According to OPP, educational materials are provided to regions, states and stakeholders to demonstrate how growers, workers and/or applicators may adhere to specific WPS requirements.

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Prior Report

EPA Office of Inspector General (OIG) Report No. 17-P-0053, *Additional Measures Can Be Taken to Prevent Deaths and Serious Injuries From Residential Fumigations*, issued December 12, 2016, recommended that the agency establish milestone completion dates for the pesticide incident database initiative.

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Chapter 2
EPA Did Not Have Adequate Management Controls to Implement, nor a Methodology to Determine Impact of, the Revised WPS Rule

We found that OPP and OECA had processes and procedures in place to implement the revised Agricultural WPS. Further, the agency provided training by January 2, 2017—the compliance date for most of the revised WPS requirements—to regional staff, state inspectors and program leads. However, we found that management controls were not fully adequate. Specifically:

- Essential educational and implementation materials were not available by January 2, 2017. In addition, the *WPS Inspection Manual* and the *How to Comply* manual were not available when the EPA conducted the majority of its training and outreach activities for the states and tribes in 2016. As a result, many state officials said that they did not have the time, tools or resources to successfully implement the revised WPS.

- As of December 2017, OPP and OECA did not have the ability to collect comprehensive agricultural pesticide exposure incident data to measure the impact of the revised WPS rule among target populations. The agency instead relied on information assessed during pesticide re-evaluations and from voluntary reporting databases. Although the EPA was working to improve its Incident Data System (IDS), the agency stated that the improvements will not increase the capability to collect additional occupational exposure data.

EPA Had Processes and Procedures to Implement the Revised WPS, but Essential Materials Were Not Provided in a Timely Manner

Office of Management and Budget Circular A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control*, directs federal managers to establish internal controls that help achieve their program objectives. In compliance with this guidance, the EPA developed processes and procedures to implement the revised WPS.

Furthermore, before January 2, 2017, the agency provided training to the regional staff, state inspectors, program leads and other stakeholders responsible for compliance with the revised WPS. The agency created most—but not all—of the educational materials required for successful implementation; these materials were available online and provided in both English and Spanish. Nonetheless,

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many state officials said they were not given the time, tools or resources to successfully implement the revised WPS.

The implementation schedule for the revised 2015 WPS rule provided agricultural establishments that employ farmworkers and pesticide handlers 14 months to implement most of the revised rule and over 2 years to implement the full rule. Based on this schedule, the initial compliance date was January 2, 2017. However, on May 11, 2017, the agency announced it would grant NASDA's petition to extend the implementation date of all revised WPS requirements "until the necessary guidance and training have been completed which would allow state lead pesticide agencies to successfully implement the rule changes." Subsequently, in a December 21, 2017, Federal Register notice, the EPA rescinded its plan to delay compliance dates. The agency announced that compliance dates in the revised WPS published on November 2, 2015, remain in effect and that the agency does not intend to extend them.

Enforcement Guidance, Training Resources and Educational Materials Were Not Available in a Timely Manner

The *WPS Inspection Manual*, an enforcement guidance document, was not published until January 2, 2017, which was the original compliance date for most of the revised WPS; the document was not available during the EPA's 2016 training sessions. Another guidance document, the *How to Comply* manual, was also unavailable during the EPA's early training sessions.

During interviews with EPA staff in Regions 4, 5 and 9, and with state lead agencies in California, Minnesota and North Carolina, issues related to the application exclusion zones and the respirator fitness testing were identified as items that needed clarification. The revised WPS application exclusion zone requirement[6] caused confusion during early WPS training sessions. The EPA therefore developed additional materials to convey the scope and implication of the application exclusion zones in April 2016. The EPA advised that PERC, which has a cooperative agreement with the EPA to create WPS educational materials, completed the guidance for respirator fitness testing in September 2017.

State Lead WPS Outreach to Stakeholders Incomplete

Pursuant to the EPA's cooperative agreements with states to implement FIFRA, states are responsible for educating their stakeholders about WPS compliance. As of June 14, 2017, OPP said that based on its communication with states, only five or six states had completed revised WPS outreach activities with their regulated communities (i.e., the agricultural establishments that employ farmworkers and

[6] According to the EPA's April 2016 *Worker Protection Standard Application Exclusion Zone Requirements: Question and Answer Fact Sheet*, "The 'Application Exclusion Zone' or AEZ is a new term used in the WPS rule and refers to the area surrounding the pesticide application equipment that must be free of all persons other than appropriately trained and equipped handlers during pesticide applications."

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pesticide handlers). Of the three states for which we interviewed staff, California and Minnesota conducted outreach with their regulated communities to facilitate WPS compliance. North Carolina staff said that they were unable to add the WPS to the agenda for their annual meetings with growers in early 2016 because the revised WPS was published in late 2015; therefore, they did not begin discussions with growers until early 2017.

The EPA relied on state lead agencies to provide outreach to their regulated communities. However, other than use of the state cooperative agreement activity end-of-year reports,[7] there is not a tool for state lead agencies to alert the EPA as to whether they have or have not initiated outreach activities.

Agency Does Not Have a Means to Measure WPS Impact on Agricultural Pesticide Exposure Incidents

The EPA does not have a means to collect comprehensive occupational agricultural pesticide exposure incident data to measure the impact of the revised WPS rule among target populations. While the main objective of the revised rule is to reduce pesticide exposure and incidents among farm workers and pesticide handlers, OPP staff said the agency is not statutorily required to collect occupational pesticide exposure incident data, nor does the agency receive funding—either for itself or states—to collect exposure incident data.

The agency relies on information assessed during the re-evaluation of active ingredients and from voluntary reporting databases. The EPA is also working to create an improved IDS. According to the EPA's *Quality Policy*, "EPA has adopted the philosophy that the quality of environmental data and information supporting the Agency's decisions must be appropriate for their intended use." The absence of comprehensive occupational agricultural pesticide exposure incidents data may result in the agency being unable to determine whether the revised WPS meets its intended goal of reducing pesticide exposure incidents among farmworkers and pesticide handlers.

Significant Barriers Exist to Obtaining Incident Data

The EPA indicated that up to 95 percent of pesticide exposure incidents involving farmworkers or pesticide handlers are not reported. According to the EPA's *Economic Analysis of the Agricultural Worker Protection Standard Revisions*, if even just 10 percent of poisonings are reported, the quantifiable benefits of the revised WPS would be about $2.6 million annually.

[7] The FIFRA Cooperative Agreement Work Plan and Report Template was developed by staff from EPA regional offices, OPP, OECA and several FIFRA state lead agencies to "promote national consistency in grantee work plans, grantee progress reports and EPA year-end evaluation reports," and "more easily allow for the compilation of data, both regionally and nationally."

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The EPA's *Economic Analysis of the Agricultural Worker Protection Standard Revisions* cites fear of retaliation as the main reason for unreported pesticide exposure incidents. This document also references a state of Washington survey, which identifies another key barrier: Although seeking medical care is one way to report incidents, agricultural workers may be reluctant to pursue treatment due to fear of lost wages or loss of a job while seeking care, cost of care, lack of transportation, and lack of trust in healthcare providers.

Obtaining incident data is also challenging because there is no universal, consistent way to gather the data. Staff from OPP, OECA, EPA regions and state pesticide agencies noted that WPS inspections are not used to report pesticide exposure incidents. State inspectors are not trained to verify a pesticide exposure incident. In addition, if an incident occurs and medical attention is provided, the clinician may not correctly identify the illness as related to a pesticide exposure incident. Even if the clinician does correctly identify the incident as related to pesticide exposure, there is no national requirement that healthcare practitioners report the pesticide incidents to their state departments of health. The Migrant Clinicians Network reports that, as of April 2017, 30 states require clinicians to report pesticide exposure cases to their state departments of health. However, the EPA advised that its pesticide cooperative agreements are generally with state departments of agriculture (and not the state departments of health), which is where the pesticide regulatory agency normally resides.

The OPP IDS Does Not Capture Occupational Pesticide Exposure Incidents

OPP said its IDS collects only a fraction of the available pesticide exposure information. As of December 2017, the system does not collect occupational agricultural worker incident data, which are generally collected through state-specific public health requirements. Even if an incident is reported to a state's department of health, there is no specific requirement that the information is reported to the EPA. In addition, incidents must be manually entered into the IDS, the IDS maintains inconsistent information of different levels of quality and verifiability, and incidents are submitted from various sources. The IDS is also stand-alone and unable to communicate with other databases.

Since 2014, OPP has been developing an improved pesticide IDS. OPP noted that progress has been slow and said completion of the IDS could take 3 to 4 years. When complete, OPP said the IDS will be an electronic incident reporting portal that will be publicly available. The new IDS aims to improve the quality of the incident data received and to increase the efficiency, consistency and transparency regarding the use of incident data in regulatory decisions and rulemaking. However, OPP said that the improved IDS will not do anything to increase the amount of occupational pesticide exposure incident data that are collected. As a result, the EPA needs to develop an alternative means to evaluate the impact of the rule on occupational pesticide incidents.

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Observed Best Practice

California law requires physicians to report any illness known or suspected to be caused by pesticide exposure. California County Agricultural Commissioners investigate the exposure circumstances within the state. California's Department of Pesticide Illness Surveillance Program collects and evaluates incident reports. The program then reviews the collected information and enters it into a database.

California's program makes illness monitoring a priority. California Department of Pesticide Regulations officials said they plan to develop a mobile phone application that will encourage agricultural workers, pesticide handlers and the general public to report pesticide poisonings and injuries.

Conclusion

Essential WPS educational and implementation materials were not available by January 2, 2017, the compliance date for most WPS revisions. Subsequently, the agency granted a request to delay the revised WPS. However, the EPA reversed this decision and announced in a December 21, 2017 Federal Register notice that compliance dates in the revised WPS published on November 2, 2015, remain in effect and that the agency does not intend to extend them. Delays to the WPS affect more than 2 million agricultural farm workers and pesticide handlers. Moreover, the agency does not have a method to evaluate the revised rule's impact on occupational pesticide exposure incidents. The agency's inability to collect occupational pesticide exposure data among WPS target populations may impede its ability to determine the impact of the revised WPS.

Recommendation

We recommend that the Assistant Administrator for Chemical Safety and Pollution Prevention, in coordination with the Office of Enforcement and Compliance Assurance:

1. Develop and implement a methodology to evaluate the impact of the revised Agricultural Worker Protection Standard on pesticide exposure incidents among target populations.

Agency Comments and OIG Evaluation

In the EPA's official comments to the draft report (Appendix A), it agreed with the original Recommendation 1 relating to establishing compliance dates. However, the EPA reversed this decision and announced in a December 21, 2017, Federal Register notice that compliance dates in the revised WPS published on November 2, 2015, remain in effect and that the agency does not intend to extend them. Therefore, the recommendation is no longer applicable and has been rescinded from the report, and the remaining recommendation renumbered.

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The agency disagreed with the other recommendation (originally Recommendation 2), and indicated that it would not be taking any corrective action. As a result of a November 30, 2017, meeting with the agency, the OIG modified the wording of the recommendation to better clarify the intent of the recommendation. However, the EPA also disagreed with the revised recommendation. Therefore, we consider this recommendation unresolved.

The agency provided technical comments on the draft report, which we incorporated into our final report as appropriate.

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Status of Recommendations and Potential Monetary Benefits

RECOMMENDATION						Potential Monetary Benefits (in $000s)
Rec. No.	Page No.	Subject	Status[1]	Action Official	Planned Completion Date	
1	10	In coordination with the Office of Enforcement and Compliance Assurance, develop and implement a methodology to evaluate the impact of the revised Agricultural Worker Protection Standard on pesticide exposure incidents among target populations.	U	Assistant Administrator for Chemical Safety and Pollution Prevention		

[1] C = Corrective action completed.
R = Recommendation resolved with corrective action pending.
U = Recommendation unresolved with resolution efforts in progress.

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Agency Response to Draft Report

MEMORANDUM

SUBJECT: Response to the Draft Report: "EPA Needs to Establish New Effective Dates for Revised Worker Protection Standard and Collect Pesticide Exposure Incident Data," Project No. OPE-FY17-0008.

FROM: Charlotte Bertrand
Acting Principal Deputy Assistant Administrator

TO: Arthur A. Elkins
Inspector General

This memorandum is in response to the Office of Inspector General's (OIG's) Draft Report entitled, "EPA Needs to Establish New Effective Dates for Revised Worker Protection Standard and Collect Pesticide Exposure Incident Data," dated September 21, 2017.[8] OCSPP is also submitting a separate redline/strikeout document with specific technical comments and corrections to the Draft Report.

The WPS plays an important role in reducing the risk of pesticide illness and injury among agricultural workers and pesticide handlers. The WPS offers occupational protections to over 2 million agricultural workers (people involved in the production of agricultural plants) and pesticide handlers (people who mix, load, or apply crop pesticides) who work at over 600,000 agricultural establishments (farms, forests, nurseries and greenhouses).
On November 2, 2015, EPA revised the WPS to implement stronger protections for agricultural workers, handlers and their families. Each year, between 1,800 and 3,000 preventable occupational incidents involving pesticide exposure occur on establishments covered by the WPS. The WPS revisions are intended to decrease pesticide exposure incidents among farmworkers and their family members. Fewer incidents means a healthier workforce and avoiding lost wages, medical bills and absences from work and school.
The Office of Chemical Safety and Pollution Prevention (OCSPP) appreciates the OIG's effort to evaluate the Pesticide Program's management controls for implementing the revised Agricultural WPS requirements.

The Draft Report contains two recommendations. As discussed below, OCSPP agrees with Recommendation 1 and disagrees with Recommendation 2.

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[8] Among the technical corrections we propose is a slight change to the Report's title to "EPA Needs to Establish New Compliance Dates for Revised Worker Protection Standard and Collect Pesticide Exposure Incident Data." The reason for this change is that there is a difference between "effective dates" and "compliance dates." The revised WPS became effective on January 1, 2016, which was 60 days after the revised WPS was published in the Federal Register. However, EPA delayed the compliance dates for one and two years after that. Employers were required to comply with most of the revised requirements beginning January 2, 2017 (the first "compliance date") and with the remaining requirements on January 2, 2018 (the second "compliance date.")

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OCSPP Responses to OIG's Recommendations

Recommendation 1: The Assistant Administrator for the Office of Chemical Safety and Pollution Prevention, in coordination with the Office of Enforcement and Compliance Assurance as deemed necessary, should establish compliance dates for the revised Agricultural Worker Protection Standard based on:

a) Completion of adequate guidance and educational materials necessary for state lead agencies to assist their regulated communities with compliance activities.
b) Dissemination of, or providing appropriate access to, the guidance documents and educational materials to the regulated community.
c) Criteria for determining the time and resources necessary for state lead agencies to effectively implement the revised standard.

OCSPP Response and Proposed Corrective Action: OCSPP agrees with this recommendation.

OCSPP, in coordination with OECA where appropriate, has already developed meaningful agricultural worker protection standard guidance and educational materials for state lead agencies and the regulated community. The following is a list of key WPS educational and implementation documents, presented by date according to availability:

- December 2015: Overview PowerPoint presentations available (short and long versions) and Detailed PowerPoint presentations on each topic available (from first WPS PREP Course)
- April 2016: Interpretive Policy and Q&As on the Application Exclusion Zone (AEZ) issued by EPA
- August 2016: 2-page Quick Reference Guide developed by Pesticide Educational Resources Collaborative (PERC) pursuant to an OCSPP cooperative agreement
- September 2016: How to Comply Manual issued by PERC
- December 2016: PERC Train the Trainer PowerPoint issued (new content; worker and handler; in-person)
- January 2017: WPS Inspector Guidance issued by EPA; and PERC Pesticide Safety Training PowerPoint issued (new content; worker and handler; in-person)
- July 2017: Pesticide Safety Poster covering the revised content issued by PERC
- September 2017: Respirator Protection Guide issued by PERC

In the coming months, OCSPP will continue to develop additional materials, including the following:

- Online train-the-trainer program from PERC (new safety training content; for trainers of workers and handlers)
- Handler training video from PERC (new safety training content for handlers)

Timeframe: OCSPP, in coordination with OECA, will establish compliance dates for the revised WPS, in accordance with the three subparts of Recommendation 1, as follows:

a) <u>Completion of adequate guidance and educational materials necessary for state lead agencies to assist their regulated communities with compliance activities</u>: Completed. As described in OCSPP's response above, numerous materials have already been developed.

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Most notably, key training and educational materials for the revised WPS were issued in September 2016 and January 2017.

b) Dissemination of, or providing appropriate access to, the guidance documents and educational materials to the regulated community: Completed. As described in OCSPP's response above, many materials have already been disseminated to recipients, and development of additional materials will continue as needed.

c) Criteria for determining the time and resources necessary for state lead agencies to effectively implement the revised standard. Pursuant to the Federal Advisory Committee Act, OCSPP's Office of Pesticide Programs (OPP) convened a public meeting of the Pesticide Program Dialogue Committee (PPDC)[9] on November 1 - 2, 2017. There was a focused session on the WPS. OPP received feedback on potential needs and concerns about complying with three key areas of the revised WPS:
    1. Application Exclusion Zone
    2. Minimum Age
    3. Designated Representative Requirement.

As a result of the input received at this PPDC meeting, by December 15, 2017, OPP will prepare an analysis to assess whether additional time for compliance, guidance, outreach, and/or training materials are needed in these areas and make recommendations to the Deputy Assistant Administrator.

OIG Response: On May 11, 2017, the EPA announced it would grant NASDA's petition to extend the implementation date of all revised WPS requirements "until the necessary guidance and training have been completed which would allow state lead pesticide agencies to successfully implement the rule changes." In the absence of new compliance dates, or definitions of "necessary guidance and training," we recommended that compliance dates and criteria for necessary guidance and training be established. In a December 21, 2017, Federal Register notice, the agency announced that compliance dates in the revised WPS published on November 2, 2015, remain in effect and the agency does not intend to extend them. As a result, this recommendation is rescinded.

Recommendation 2: Establish a system to collect and track pesticide exposure incidents among Agricultural Worker Protection Standard target populations to enable measurement of the standard's impact and effect.

OCSPP Response: OCSPP disagrees with this recommendation for the following reasons:

1) No Clear Statutory Authority

The Pesticide Program does not have clear statutory authority to require the submission of pesticide exposure incident information from states or target populations affected by the WPS

[9] EPA established the PPDC in September 1995 to provide advice and recommendations to the EPA Administrator on issues associated with pesticide regulatory development and reform initiatives, evolving public policy and program implementation issues, and science issues associated with evaluating and reducing risks from use of pesticides. The following sectors are represented on the PPDC: environmental/public interest and animal rights groups; farm worker organizations; pesticide industry and trade associations; pesticide user, grower, and commodity groups; Federal and State/local/tribal governments; the general public; academia; and public health organizations.

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rule, and has no statutory authority to compel the submission of pesticide exposure incident information from states or target populations (even if EPA could issue a rule to compel the submission of such information, it lacks the authority under Section 12 of FIFRA to prosecute any failure to comply with such a rule).

OIG Response: The OIG is recommending that OCSPP have the ability to measure the impact of the revised WPS implementation. In the EPA's official response, there is not a proposed corrective action that addresses this concern. As a result, this recommendation is unresolved.

2) Unavailability of Data on Farmworker Incidents

Although there are efforts in a small number of states to collect occupational pesticide incident data from farmworkers, data on farmworker pesticide exposure incidents is generally unavailable. OPP collects pesticide incident data from a wide variety of sources, but even in combination, those sources are neither detailed nor comprehensive enough to provide a statistically representative picture of farmworker pesticide incidents.

OIG Response: The Migrant Clinician Network advised that 30 states collect pesticide incident data. OCSPP staff stated that the data exist but that the agency does not have a mechanism to access the data. OPP said its current IDS collects only a fraction of the available information. In the EPA's proposal to revise the WPS, the agency justified the revision because it was intended to reduce the incident rates of occupational pesticide exposure and related illnesses among pesticide handlers and agricultural workers who are covered by this rule, as well as to protect any bystanders from exposure to agricultural pesticide use. The agency needs the ability to collect this available data.

The National Institute of Occupational Safety and Health's (NIOSH's) Sentinel Event Notification System for Occupational Risk (SENSOR) Pesticides database collects occupational incident data from 9-13 states and provides the best reach into farmworker exposures, in part due to contributions from the California Department of Pesticide Regulation's (CDPR) unique surveillance system, the Pesticide Incident Surveillance Program (PISP). The PISP captures required reporting on pesticide poisoning from physicians and from analyses of workman's compensation information and provides follow-up investigation of each incident, including details about the circumstances of the exposure. The PISP is supported by a team at CDPR and 56 county agricultural commissioners who provide the detailed follow up. Without rigorous investigation and capture of critical details about each incident, a reliable analysis of the impact of the WPS cannot be made. Even California's data does not provide a complete snapshot of the impact of the WPS, because California regulates worker safety under separate requirements, which differ from the revised WPS (but are considered equivalent in protection).

3) Database Costs and Data Quality

OPP uses NIOSH's SENSOR Pesticides database of occupational pesticide incidents and other incident information to help characterize risk, identify problem areas, and to make risk management decisions on specific pesticides; and to help support rulemaking. SENSOR

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currently collects incidents from between 9-13 states, depending on the year, which are the states where almost 60% of the farmworkers (based on data from 2008 – 2011) work, but does not represent the full national count of farmworker incidents. For example, about half of the incidents in SENSOR Pesticides are provided by California. Recently, OPP has contributed between $100,000 and $175,000 annually to support this data collection. It is unlikely that the SENSOR-Pesticides database could be expanded to include all states due to competing priorities and staff constraints at the state level and a limited amount of federal funding to support state participation.

As explained in the Economic Analysis of the 2015 WPS rule and supported by peer-reviewed publications[10], even where the best incident surveillance systems are in place, underreporting of pesticide exposure and incidents is a significant concern. Underreporting may occur due to symptoms that are not easily recognized or diagnosed as pesticide-related and/or due to potential barriers that exist for farmworkers to seek medical attention.

4) Limitations on the Use of Current Enforcement Data

The Draft Report mentions enforcement data as a potential source of incident data however, inspections are not a useful vehicle for collection of meaningful incident data for the following reasons:

- Inspections focus on identifying misuse of a pesticide, and not all misuse results in pesticide exposure.
- Misuse inspections are conducted by states[11] and state reporting to EPA is limited to minimize the resource burden on the state agencies.
- Data collected through inspections and reported to EPA (other than for "high level incidents"[12]) do not contain information on potential pesticide exposure incidents.
- The number of inspections is very small compared to the universe of establishments covered by WPS, and strategies to select inspection targets vary from state to state and year to year.
- Increased awareness of the requirement to report or the availability of options to report incidents can influence the number of incidents reported outside of the impact of the rule. In California, CDPR has on occasion issued letters to physicians reminding them of their mandated responsibility to report pesticide incidents, resulting in a significant increase compared with previous years' data.

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[10] The discussion of underreporting in Chapter 4 of the Economic Analysis of the Agricultural Worker Protection Standard Revisions (2015) is based largely on the following publications: (1) Das R, A Steege, S Baron, J Beckman, R Harrison. 2001. Pesticide-related illness among migrant farm workers in the United States. Int J Occup Environ Health 7:303-312; (2) Kandel, W. 2008. Profile of Hired Farmworkers, 2008 Update, Economic Research Report No. 60, Economic Research Service, U.S. Department of Agriculture, June; (3) Washington State Department of Labor & Industries. Farm Worker Health and Safety in Washington State: A Look at Workers' Compensation Data. Olympia, WA: Safety and Health Assessment and Research for Prevention, Report No. 24-2-1991, 1991.

[11] With few exceptions, for example, in Indian Country where EPA provides the inspections.

[12] On very rare occasions, states encounter a "high level incident" involving serious adverse effects to human health or the environment, which may require close cooperation with EPA or other agencies to conduct an investigation or bring the incident under control or to a resolution. These incidents must be reported to EPA under the FIFRA cooperative agreements, but are typically not identified through routine inspections.

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OIG Response: As reported, the OIG stated that, based on consultation with numerous stakeholders, WPS inspections are not used to collect occupational pesticide incident information.

Timeframe: For the reasons stated, no further action or a timetable is proposed for this recommendation.

OIG Response to Recommendation 2: As a result of a November 30, 2017, meeting with the agency, the OIG modified the wording of Recommendation 2. The EPA disagreed with the revised recommendation and provided an alternative, which we have determined does not address the published intent of the rule. As a result, this recommendation is unresolved.

Conclusion and Contact Information: Overall, the agency is pleased that the Draft Report recognizes OCSPP's continuing efforts to improve worker safety and protection through the implementation of the revised Worker Protection Standard. This has been a collaborative audit process, which has helped the agency to consider potential improvements during the implementation of the WPS.

If you have technical questions regarding this response, please contact Kevin Keaney, OCSPP/OPP, Keaney.kevin@epa.gov, If you have other questions, please contact Janet Weiner, OCSPP's Audit Liaison, at Weiner.janet@epa.gov.
Attachment

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Appendix B

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