



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

OCT 17 2000

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

The Honorable Henry Waxman
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Waxman:

Thank you for your letter of July 28, 2000 to Administrator Browner concerning the report of the General Accounting Office (GAO) entitled "Pesticides: Improvements Needed to Ensure the Safety of Farmworkers and Their Children." Because your letter and the report concern pesticide regulation, Administrator Browner forwarded your letter to my office for reply.

I am responding on behalf of the Office of Pesticide Programs (OPP) and the Office of Compliance in the Office of Enforcement and Compliance Assurance (OECA). I apologize for the lateness of this response. Due to the broad range of efforts underway and the many partners involved, it took some time to effectively pull the information together. I hope the level of detail in this letter is adequate for your current needs. If useful to you, we expect that we will be able to offer more detailed information as we proceed.

As you know, GAO examined existing data on pesticide related exposure to farmworkers, and EPA's efforts to assure protection for farmworkers and their children from pesticide risks, particularly through the Worker Protection Standard (WPS). GAO made a number of recommendations pertaining to the following issues: (1) improving the data on acute pesticide illnesses; (2) taking steps to protect children younger than 12 years old who work in agriculture or who might be otherwise present in pesticide-treated fields; (3) completing documentation of the adequacy of the WPS entry intervals for children; and (4) strengthening EPA's oversight of state implementation and enforcement of the WPS.

The Agency has activities underway which we believe will fully respond to all of GAO's recommendations. As you requested, I will now provide you with updates and other information pertaining to Agency activities addressing each of GAO's recommendations.

GAO Recommendation #1 - "To better understand the risks that pesticides pose for farmworkers and their families as well as for the general public, we recommend that EPA work with the National Institute for Occupational Safety and Health (NIOSH) and the National Center for Environmental Health (NCEH) to implement their suggestions for improving the quality of information on acute pesticide illnesses in the nation, including establishing time frames, assigning responsibilities and identifying resource needs and sources to accomplish this important objective."

Monitoring Pesticide Illness: The GAO report identified four areas for improving data collection. The first concerns the EPA and NIOSH-funded program referred to as the Sentinel Event Notification System for Occupational Risk (SENSOR) program. The SENSOR program monitors pesticide illness and injury in six states: California, Washington, Oregon, Texas, New York, and Florida. The program provides funding and technical assistance to the participating states to support the pilot gathering and analysis of standardized data collection on pesticide illnesses and injuries. The program includes incident case identification, follow-up and intervention.

EPA strongly supports this collaboration with NIOSH to expand and improve data collection and reporting of pesticide-related illnesses. EPA and NIOSH have renewed their interagency agreement to work together on data collection and reporting issues for another five years (Sept. 2000-Oct. 2005). In addition, during fiscal year 2000, EPA has contributed additional funding so that one to two more states will be funded. During the past five years (FY 1995-2000), EPA has spent a total of \$1,174,400 to assist NIOSH to enhance data collection and reporting capabilities.

EPA and NIOSH are working together to revise data collection software to help standardize the collection of information on pesticide illnesses and injuries. Implementing standardized data elements will yield better information on the number of illnesses and injuries, as well as make the information more useful in assessing the effectiveness of illness prevention and intervention efforts. We are working with NIOSH on a report for the first year of reporting for all six participating states. This will serve as the benchmark report for comparison. We expect the preliminary report in November 2000.

EPA is also working with NCEH to improve pesticide data collection. EPA's Offices of Research and Development (ORD) and OPP, and the United States Center for Disease Control, have each provided \$100,000 to NCEH for a two-year pilot study with the Texas Health Department. This study, now midway through its second year, will help the agencies monitor pesticide illness and injury from non-occupational exposures.

Training of health professionals: GAO recommended that EPA work to improve the training of health care professionals to help them recognize acute pesticide illnesses and injuries. In 1998, EPA, in collaboration with the U.S. Department of Health and Human Services, the U.S. Department of Agriculture, the U.S. Department of Labor, and the National Environmental

Education and Training Foundation, launched an initiative to provide health care professionals with education and training opportunities on health issues pertaining to pesticides. The overall goal of the initiative, *Pesticides and National Strategies for Health Care Providers*, is to improve the recognition, management, and prevention of pesticide-related health conditions.

The draft implementation plan was published July 2000 (copy enclosed). Components of the plan include: assessing the current knowledge of faculty and practitioners on this issue; developing guidelines that recommend curricula for all basic and advanced training in medicine and nursing on the recognition, management, and prevention of pesticide-related health conditions; and creating an Internet gateway to guide health care providers and others to informational resources and educational materials on this issue. We expect to complete the plan and begin implementation next Spring.

Survey of Agricultural Workers: GAO recommended that the Agency conduct a periodic survey of agricultural workers to identify individuals with pesticide illnesses who have not sought health care and therefore would not have been reported in surveillance systems. EPA is participating in a number of activities to better assess the health of agricultural workers and their families to evaluate their environmental and occupational risk factors from pesticide exposure. EPA and NIOSH are funding the National Agricultural Workers Survey, an ongoing effort by the Department of Labor. As of August, more than 20,000 interviews have been completed. The interviews include questions concerning the following: demographics, farmworkers' job mobility, day care arrangements, access to medical care, WPS training, exposure to pesticides, and reports of pesticide illness. Data from this survey, with other studies, will assist EPA in addressing issues of pesticide exposures to farmworkers and their families.

Agricultural Health Study: In another joint effort, the National Cancer Institute (NCI), EPA, NIOSH, and NIEHS are conducting a long-term epidemiology study of 90,000 certified pesticide applicators and their families. The Agricultural Health Study is looking at cancer and non-cancer endpoints in Iowa and North Carolina using periodic surveys of the population. Pesticide use practices and health outcomes are being examined in detail. Some initial results have already been published for high exposure events and effects to the eye. Examination of other health outcomes are planned -- breast and prostate cancer this year, and other cancers, asthma, and Parkinson's disease after that. As part of the Agricultural Health Study, field work in Iowa is being conducted, and over the next three years detailed exposure analyses on a sub-sample of families using various agricultural pesticides will be completed.

The Agency is also pursuing several other research efforts likely to provide additional information about exposure to farmworkers and their children. For example, the NHEXAS (National Human Exposure Assessment Survey) was developed by the EPA's ORD early in the 1990s to provide critical information about multi-pathway, multi-media population exposure distribution to chemicals. The data has been collected and the database is now being compiled. We expect to have the information accessible on the Internet in FY 2001.

Another example of research which should add to our understanding of pesticide exposures and farmworker families is the study of Children's Total Exposure to Persistent Pollutants (CTEPP) conducted through EPA's ORD. The data collection under this study, initiated this year, should be completed and available in FY 2004.

GAO Recommendation #2 - "Identify and expeditiously implement steps to mitigate the potential adverse effects of pesticide exposure on children below the age of 12 who work in agriculture or are otherwise present in pesticide-treated fields. Such steps might range from warning farmworker parents about the adverse effects that agricultural pesticides may have on their young children to having pesticide labels clearly state that children should not enter pesticide-treated agricultural areas for specified periods."

The category of children below the age of 12 is diverse in that it may include: children under the age of 12 who work illegally; those children who accompany their parents to the fields for other reasons, such as the lack of adequate child care; dependents of farmers who are permanent residents; and those children who live close to agricultural operations. The strategy is intended to reduce the overall exposures to each segment of this group.

EPA has underway a four-part strategy to minimize the overall impact of these kinds of exposures. This includes: (1) enhancing enforcement of EPA's farmworker protection regulations, (2) improving education of farmworkers and their families, farm managers, and primary health care providers about the use and effects of pesticides, (3) developing better data to more definitively characterize the magnitude of these kinds of exposures, and (4) implementing risk assessment methods to assist EPA in making risk management decisions for children in agricultural areas.

Many aspects of the strategy will be at least partly met by successfully responding to the other GAO recommendations. For example, education on pesticide health and safety concepts is not only an important component of EPA's work to improve data collection on pesticide exposures and injuries, but is crucial in providing the information that workers can use to protect themselves and their children. In the initial phases of implementing the WPS, the Agency developed and distributed a wide array of safety training materials primarily for the workers and those responsible for pesticide use. The Agency is now actively engaged in determining better ways to disseminate pesticide health and safety concepts to farm worker mentors, parents, and their children, as well as programs and research focusing on migrant health. The Agency is also building upon earlier efforts to broadcast information about the pesticide health and safety issues to Spanish speaking agricultural workers through the Hispanic Radio Network, and is establishing a cooperative program with Americorps that provides pesticide safety training to agricultural workers. EPA is also expanding its outreach to include a program to provide training on pesticide related illnesses for tribal health care providers. A better understanding of the problem by all parties should help provide a more protective working environment for farmworkers and their families.

GAO Recommendation #3 - Complete the documentation supporting EPA's conclusion that the Worker Protection Standard's reentry intervals (REI) adequately protect children 12 years of age and older, and provide the documentation to the Children's Health Protection Advisory Committee for its review.

EPA calculates the margins of exposures for workers by comparing residues available for exposure with information about the time spent in various agricultural tasks and actual contact with pesticide residues. The reentry interval is based upon the time it takes for pesticide residues to dissipate to a point where people can enter previously treated areas to work without excessive exposure and risk. EPA believes that the REIs are as protective of children over 12 as they are for adults because they would have similar exposures on a unit basis.

This conclusion is based on a study (Phillips et al, *Journal of Exposure Analysis and Environmental Epidemiology*, Vol. 3, No. 3, 1993, pp. 331-338) that showed the ratio of the skin surface area to body weight for children over 12 is similar to that of adults. Most exposures of post-application workers occur through the skin. The rate at which pesticide residues are available to cross the skin barrier and be absorbed is related to the skin surface area of an individual. If the ratio of skin surface area to body weight is similar between adults and children over 12, it follows that the unit dose is similar for children and adults. With similar doses, the margins of exposures are also similar and the resulting REIs are as protective of children as they are adults.

Additionally, in the EPA and Department of Labor *Youth in Agriculture* studies, exposures of working children were compared to working adults. These studies showed that the exposures of children were similar to those seen for adults. The study also noted that in general children did not harvest as much as adults, thus lowering their exposures.

EPA is preparing a presentation of the relevant studies, along with an analysis of the studies for the Children's Health Protection Advisory Committee, and will provide the Committee with full documentation by December 31, 2000.

GAO Recommendation #4 - Improve EPA's oversight of the states' implementation and enforcement of the Worker Protection Standard by, among other things: (1) clearly defining what constitutes a worker protection inspection for the purposes of the cooperative agreements; (2) establishing goals for the minimum number of worker protection inspections that states should conduct annually under their cooperative agreements; (3) examining whether the resources that states dedicate to this function under the cooperative agreements are adequate to achieve the goals established; (4) clarifying the roles and responsibilities of EPA's regional offices to ensure consistency in their oversight of the program; and (5) taking the necessary steps to obtain and analyze data on the results of the states' worker protection inspections, including the number and types of actions taken in response to worker protection violations.

Reassessment of the WPS program: In response to GAO's findings and recommendations, as well as concerns raised by others, including the Office of Children's Health Protection Advisory Committee and worker advocacy groups, EPA has launched a national assessment of the worker protection program. In June 2000, EPA convened the Initial Stakeholder Meeting for the National Assessment of the WPS program in Austin, Texas. The Austin meeting was the first of three national stakeholder meetings being held to invite stakeholder participation in the reassessment of WPS. The next stakeholder meeting will be held in Sacramento, California, in December 2000, and a third stakeholder meeting will be held in Orlando, Florida, in the Spring of 2001.

The national assessment will help the Agency determine whether the WPS program is adequately meeting its intended goals of addressing the risks to agricultural workers. The reassessment is focusing on implementation, enforcement, EPA oversight of State programs, outreach and communication to the regulated community and other stakeholders, review of worker and handler training issues, special needs and concerns of pregnant women and children, and strategies for educating health care workers and the medical community. The Executive Summary of the meeting is enclosed for your reference.

EPA's Office of Enforcement and Compliance Assurance (OECA) has initiated a national review of the enforcement and compliance components of the WPS program. This review will provide a supplementary assessment of enforcement and will be incorporated into the broader WPS implementation assessment undertaken by the OPP and OECA. The review should conclude during FY 2001. First, EPA Headquarters and Regional personnel, with state assistance, will review EPA implementation of the enforcement and compliance components of the program. Then EPA Regional personnel will review state implementation of the program in at least one state per EPA Region. The information obtained through the federal and state levels of review will be compiled into a report of findings and conclusions as a basis for action.

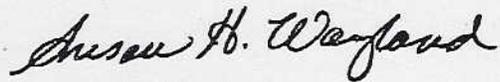
Changes in cooperative agreements on WPS: Most of the recommendations concerning implementation and enforcement of WPS indicate changes needed in the cooperative agreements between EPA regions and states, and in the cooperative agreement negotiation process. The Agency has already begun improvements to WPS implementation and enforcement as part of the current cycle of cooperative agreement negotiations. Because a number of state fiscal years begin in July, some of the negotiations for the 2001 cooperative agreements took place last Spring continuing through this Summer. The WPS improvements raised during these negotiations will be further pursued as part of the 2002 grant negotiations.

WPS inspection definition and guidance: As an outgrowth of the initial WPS assessment meeting in June, a workgroup of Regional and Headquarters representatives was formed to develop a WPS inspection definition and guidance on a minimum level of WPS inspections for a state inspection program. The group has developed a definition and is in the process of evaluating comments received from Regional staff. The final inspection definition and guidance concerning a minimum annual level of WPS inspections, will be included in the 2002/2003 grant

guidance. A second work group of State, Regional, and Headquarters managers is developing new 2002/2003 grant guidance, including amended oversight guidance and updated data needs. This guidance will be issued no later than March 2001.

I hope the information in this letter is helpful. Please let me know if you need additional information.

Sincerely,



Susan H. Wayland
Acting Assistant Administrator

Enclosures