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Policies and Procedures

Title: Guidelines and Precautions to be Taken by Personnel in Storing, Using, Handling, and Disposing of Agricultural Chemical Pesticides

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This P&P states guidelines and precautions needed in storing, using, handling, and disposing of agricultural chemical pesticides.

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1. References

Pesticide applicator training manuals as developed by State pesticide coordinators.

2. Summary

Stated are policy, procedures, responsibilities, definitions, and guidelines for personnel who store, handle, use, and dispose of agricultural chemical pesticides.

The provisions of this P&P will be implemented at all locations where agricultural chemical pesticides are utilized in either the laboratory, greenhouse, or the field. Specific written operational procedures to implement these provisions will be developed at each location where these chemicals may present a potential hazard.

3. Authorities

- CFR Title 29, Part 1910, Subpart I
- CFR Title 40, Parts 260-268
- CFR Title 40, Part 273
- CFR Title 40, Chapter 1, Parts 165, 170, and 171
- CFR Title 40, Part 355
- Federal Register Volume 45, Number 65, Page 21703-21705, April 2, 1980
- Department of Agriculture Federal Agency Plan; Certification of Applicators of Restricted Use Pesticides (April 2, 1980)
- Federal Register Volume 57, Page 38102, August 21, 1992
- Federal Register Volume 60, Number 85, Page 21948-21953, May 3, 1995

4. Policy

It is Agency policy to store, handle, use, and dispose of pesticides and containers in accordance with Federal, State, and local regulations so as to minimize risks to employees, the general public, domestic animals, wildlife, and the environment. Where Federal, State, or local regulations and the guidelines of this P&P differ, employees will apply the more stringent rules.

5. Objectives

To provide Agency employees with policies, guidelines, and procedures on the storage, handling, use, and disposal of pesticides and containers. This includes safe use of pesticides in laboratories, greenhouses, and the field.

6. General Requirements

Personnel storing, handling, using, and disposing of restricted use pesticides will be trained and certified under an approved State plan. Where necessary, employees can be trained and certified under a USDA Agency plan for certification.

The quantity of pesticides maintained in storage will be limited to amounts required for annual program use. Stockpiling of pesticides is not allowed. At the completion of a project day's work, all unused pesticides and empty containers must be returned to storage.

Wherever zero pest tolerance or the maintenance of specific insects is not a requirement, Integrated Pest Management (IPM) principles will be utilized. Center and location management will commit to adopting and promoting IPM as the preferred methodology to control pests and diseases throughout their facilities and land.

When pesticides are utilized by employees in the practices of pest control, they will use pesticides labeled for general use where possible. If restricted use pesticides are utilized, they will be applied by a certified applicator or under the direct supervision of a certified applicator. Pesticide applications will be made in accordance with the directions on the label and all precautions on the label will be followed.

Where pesticides are included in research programs to evaluate their pesticidal, environmental, or health effects, such as Interregional Research Project #4, these pesticides will be applied and evaluated under the direct supervision of a scientist engaged in pesticide research who is familiar with the toxic and environmental properties of pesticides. For instance, a scientist who has been certified to use restricted use pesticides would be considered as being familiar with toxic and environmental properties of pesticides. Appropriate precautions will be taken in the application and handling of these pesticides according to their toxicity and potential adverse impact on the environment.

Purchase and use of pesticides containing extremely hazardous substances as listed in 40 CFR Part 355, Appendices A and B, should be discouraged. If purchases of these pesticides are necessary, they should be purchased and stored in quantities less than the threshold planning quantities listed in 40 CFR Part 355.

7. Training and Certification of Personnel

All employees who may work in or near greenhouses, growth chambers, fields, or any other locations where pesticides may be applied must be appropriately trained. Each State manages their own program and therefore training requirements vary greatly. Differences between programs may include who must be trained, what topic must be included, and the frequency of re-training or re-certification. Some States have separate requirements for pesticide applicators and others who perform pesticide handler duties but do not actually apply pesticides. Other States do not differentiate between applicators and handlers. Below are the minimum Federal guidelines. It is important to consult with State and/or local authorities in which the facility is located. The following are job specific training requirements:

Pesticide Handlers.

- Before performing any handling task, a handler must be trained by a certified applicator of restricted use pesticides, a person designated as a trainer of certified applicators or pesticide handlers by a Federal or State agency having jurisdiction, or a person who has completed a pesticide safety train-the-trainer program approved by a Federal or State agency having jurisdiction.
- The information shall be presented to handlers either orally, from written materials, or audiovisually. The information must be presented in a manner that the handlers can understand. At a minimum, the following topics must be included:
 - Format and meaning of information on pesticide labels;
 - Hazards of pesticides resulting from toxicity and exposure, including acute and chronic effects, delayed effects, and sensitization;
 - Routes by which pesticides may enter the body;
 - Signs and symptoms of common types of pesticide poisoning;
 - Emergency first aid for pesticide injuries and poisoning;
 - How to obtain emergency medical care;
 - Routine and emergency decontamination procedures;
 - Need for and appropriate use of Personal Protective Equipment (PPE);
 - Prevention, recognition, and first aid treatment of heat related illness;

- Safety requirements for handling, transporting, storing, and disposing pesticides, including general procedures for spill cleanup;
 - Environmental concerns such as drift, runoff, and wildlife hazards;
 - Warnings about taking pesticides or pesticide containers home;
 - Protection against retaliation for following rules and regulations;
 - Precautions in handling the concentrate chemical and mixing of chemicals for dilution;
 - Instructions in calculations for mixing a finished spray; and
 - Application equipment calibration and decontamination.
- Handlers must receive the above minimum training every 5 years. Frequent refresher training, such as the beginning of each spray season, is recommended.

Certification of Applicators.

- For persons who handle restricted use pesticides or unlabeled candidate pesticides, the supervisor or applicator must be certified through a State certification program. Persons who are handling restricted use pesticides and not certified must be under the direct supervision of a certified applicator and receive training as listed above for handlers.
- Personnel requiring certification must meet the established qualifications within their State of residence as a certified applicator in Category X (Research and Demonstration) or appropriate category as defined by the State or locality.
- If the assigned duties of the applicator are specialized in their function, and subject to the discretion of the supervisory personnel, the applicator may be further required to meet the established State qualifications within that specialized category of certification, i.e., ornamentals, livestock, etc.
- If the applicator is not certified, the applicator shall demonstrate under personal supervision of the certified applicator to be competent to carry out the duties of pesticide handling and application in a responsible and sensible manner. The applicator's safety conduct shall be the responsibility of the certified applicator.

- Certified applicators must be recertified every 3 years or as otherwise specified by the State in which they are certified.
- Certified applicators do not require further training as pesticide handlers or agricultural workers.

Agricultural Workers.

- Agricultural workers must receive basic training including the following:
 - Where and in what form pesticides may be encountered during work activities;
 - The hazards of pesticide exposure including acute effects, chronic effects, and sensitization;
 - Pesticide entry routes into the body;
 - Signs and symptoms of pesticide poisoning;
 - Emergency first aid procedures;
 - Decontamination procedures;
 - The hazards from fumigation and drift;
 - The hazards from pesticides on clothing;
 - The warnings about taking pesticides home; and
 - An explanation of the Worker Protection Standard and this P&P.
- Agricultural workers must receive the above minimum training every 5 years. Frequent refresher training, such as the beginning of each spray season, is recommended.

Field Coordinators and Greenhouse Coordinators.

- Field Coordinators and greenhouse coordinators are not required to be pesticide handlers, but it would be beneficial for them to have the same training. At a minimum, these employees will have training regarding their responsibilities identified in this P&P.

Support Personnel.

- Support personnel, e.g., facilities engineers, security, maintenance, housekeeping, and any other support personnel that may come in contact with pesticides should be trained similar to agricultural workers. At a minimum, they must be made aware of the dangers as part of the facility's hazard communication program.

8. Operational Procedures

Each location where pesticides are utilized will develop a set of written operational procedures for the employees at that location. These operational procedures should be developed by the center director, location leader, research leader, and the scientists involved in the use of the pesticides. Each location may have specific needs for pesticide uses. These may vary from location to location; therefore, general operational procedures cannot be developed. However, the operational procedures should cover as a minimum: (1) guidelines for storage and transport of pesticides; (2) guidelines for emergencies or accidents related to pesticides; (3) methods of equipment calibration and decontamination; (4) methods of storage and disposal of concentrates, diluted pesticides, empty containers, and contaminated personal protective equipment; (5) training in the application, use, and environmental considerations for pesticides; (6) mechanisms for monitoring of waste disposal areas and employees where necessary; (7) safety and health procedures; (8) personal protective equipment and clothing; (9) toxic effects and medical symptoms of overexposure; (10) procedures for posting and unposting areas of pesticide application; (11) location and management of the designated central information center; (12) location and management of decontamination sites; (13) specific procedures for cleanup of spills; and (14) any required record keeping of pesticide applications and disposal.

Laboratories conducting pesticide research should include written standard operating procedures for working with pesticides as part of the laboratory chemical hygiene plan.

Storage Site Selection

Pesticides and their containers must be stored only in facilities approved by the Area Safety and Health Manager and where consideration has been given to the hazardous nature of the pesticides, potential environmental damages, and adequate personal safety and security systems in and around the storage site.

Storage sites shall be selected according to the following criteria:

- Where flooding is unlikely;
- Where easily accessible by firefighting equipment;

- Located away from any public building or activity so that if an emergency spillage, fire, or explosion occurs, it would not cause harm to the general population;
- Located a safe distance away from any potable water supply, streams, lakes, or drainage canals that discharge to water supplies; and
- Not stored in any facility used primarily as food/feed/fertilizer/seed storage or processing centers.

Storage Facilities

With the exception of small quantities of pesticides used in attached greenhouses and the laboratory for research, pesticides should be stored in a dry, well ventilated building which is separate from offices and laboratories, with appropriate spill containment and fire protection, and protected from freezing or overheating. All pesticides in storage must be properly labeled. When handling pesticides in storage facilities, employees must follow applicable safety and health procedures as outlined under paragraph “Safety and Health Procedures” of this section. The following precautions will be taken:

- Where large quantities are stored, the entire storage facility should be secured by a fence, and doors and gates should be kept locked to prevent unauthorized entry.
- Highly visible, waterproof identification signs on doors, gates, buildings, and fences to advise of the hazardous nature of contents, with telephone numbers and names for additional information will be posted in areas where they will be visible.
- Adequate fresh water supply and soap or special solvents necessary for decontamination of personnel and equipment will be available.
- Pesticide containers will be stored with the label plainly visible.
- If pesticide containers are not in good condition when received, the contents must be transferred to a sound, suitable container and be properly labeled or the container and its contents must be properly disposed.
- If a pesticide is transferred to a small container for convenient use, the new container must be properly labeled.
- Containers will be checked at least monthly for corrosion and leaks. If such is found, the contents must be transferred to a sound, suitable container and be properly labeled or the container and its contents must be properly disposed. Inspections shall be noted on a log sheet or in a log book which is kept available for reference.

- Materials such as adsorptive clay, granulated activated charcoal, hydrated lime, and sodium hypochlorite must be available for emergency treatment or detoxification of spills or leaks. Upon discovery of a spill or leak, isolate the contaminated area and keep out all unauthorized personnel. Allow no smoking in the area. Ventilate area thoroughly. Immediately contact your Area Safety and Health Manager and dispose of pesticide and container in an acceptable manner as outlined in this section under paragraph “Disposal of Pesticides, Pesticide Containers, and Pesticide Wastes” of this P&P.
- Pesticides in containers which could be damaged by moisture or water will be stored off the floor. Metal or other nonabsorptive shelving or pallets should be used.
- Liquid pesticides must be stored in a manner so that a spill or leak does not contaminate nonliquid pesticides.
- Excess pesticides and containers will be segregated according to the method of disposal to ensure that entire shipments of the same class of pesticides are disposed of properly, and that accidental mixing of containers of different categories does not occur during the removal operation.
- Pesticides will be stored according to special storage requirements and compatibility properties as specified on the label, with appropriate spill containment, and separately from other products and materials in storage areas.
- A current inventory of all pesticides in each storage unit will be posted in an inside location accessible and visible to program personnel. This inventory will include the name(s) listed in order of toxicity category with appropriate signal words of each pesticide, the number and kind of containers, and the date each was received.
- All quantities of highly toxic and experimental pesticides and pesticides containing extremely hazardous substances (listed in 40 CFR Part 355, Appendices A and B) will be secured in a lockable storage unit with limited access.
- Small quantities of pesticides may be stored in the laboratory if used for research in that laboratory.

Transport of Pesticides from Storage to Mixing

- Mixing of pesticides should be done at or near the storage area whenever possible. If transportation is required, then pesticides in containers and packages must be moved safely so that carelessness will not result in broken containers, spillage, and contamination. Pesticides will not be transported inside automobiles or truck cabs, and attempts should be made to avoid spills and breakage due to sharp turns or sudden stops by vehicles carrying pesticides.

- Each location will develop general procedures to follow for decontamination of vehicles in case of spills or leaks of toxic pesticides.

Centrally Located Information Center

- Each research center or location must provide at least one centrally located information center accessible to employees.
- The information center must display the EPA Worker Protection Standard safety poster.
- The information center must provide the name, address, and telephone number of the nearest emergency medical facility.
- The information center must provide facts about each pesticide application from before the application until 30 days after the restricted entry interval (REI) including:
 - the product name, EPA registration number, and active ingredient(s);
 - the location and description of the treated area; and
 - the time and date of application and REI.
- Workers and handlers must be provided with the location of the information center, and told if the information changes.
- Posted information must remain legible.
- A copy of the pesticide label and Material Safety Data Sheet (MSDS) must be available for employees to read and possibly take to a medical provider in case of emergency.

Decontamination Sites

- Decontamination supplies must be provided within 1/4 mile of all workers and handlers. However, if workers are more than 1/4 mile from the nearest place of vehicular access, the supplies may be at the nearest place of vehicular access.
- The decontamination site must supply enough cool clean water for routine and emergency whole body washing, eye flushing, drinking, and plenty of soap, single use towels, and a clean coverall. Tank stored water used for mixing pesticides must not be used.
- Handlers must be provided the same supplies where PPE is removed at the end of a task.
- Each mixing and loading site must have the same supplies available.

- At least 1 pint of eye flush water must be immediately accessible to each handler.
- Worker decontamination sites must not be located in areas being treated or under an REI.
- In treated areas, decontamination supplies for handlers must be stored in enclosed containers.

Notifying and Posting Notices of Pesticide Application

- If the pesticide labeling requires posting, treated areas must be posted with approved weatherproof EPA Worker Protection Standard warning signs or approved signs consistent with the requirements of the State or local jurisdiction.
- If the label does not require posting, workers may be informed orally or by posting treated areas. Workers must be told which method is in effect.
- Warning signs must be posted just before application, during the REI, and removed within 3 days of the end of the REI.
- When using posting for notification, field applications must be posted so they can be seen from all points where workers usually enter treated fields.
- All greenhouse applications require posting at all entrances.
- Fields treated with experimental pesticides will be posted with warning signs indicating that experimental pesticides are in use.
- All contractors working in or near pesticide treated areas must be informed of the facility's policies and procedures, and contractor personnel must be appropriately trained.

Entering Pesticide Treated Areas

- In areas being treated with pesticides, only appropriately trained and equipped handlers will be allowed entry.
- Nursery workers must be kept at least 200 feet away from nursery areas being treated.
- Only handlers will be allowed in greenhouses during a pesticide application and until the labeling listed air concentration level is met or, if no such level, until 2 hours of ventilation with fans. If the application was made with an experimental use pesticide, the 2-hour interval may be lengthened to ensure that conditions are safe for entry.

Early entry into pesticide treated areas is discouraged and should be avoided whenever possible.

Early entrants must be properly trained and protected with appropriate PPE. Specific exceptions are provided for early entry personnel regarding irrigation and certain activities involving limited contact with treated plants.

- Certified or licensed crop advisers who enter treated areas while an REI is in effect are considered handlers and must be trained and provided with appropriate PPE.
- Irrigation workers are allowed to enter treated areas during the REI to perform necessary irrigation activities when the need for the task could not have been foreseen and if delayed, could cause significant economic loss or disrupt research activities. Irrigation workers must wear the PPE required by the label, must wait 4 hours after treatment before entering, and are allowed to work in areas under REI for only 8 hours in a 24-hour day.
- Limited contact workers who perform limited contact tasks have the same exemption as irrigation workers and with the same restrictions. A limited contact task is a task for which hands are not used and that results in minimal contact to the forearms, hands, lower legs, and feet.

Safety and Health Procedures

- All personal protective equipment and clothing as required by the label or written standard operating procedures must be worn in the handling of pesticides for storage, mixing, and application.
- Handlers must not allow anyone other than trained and PPE-equipped handlers to be contacted by pesticides, either directly or through drift.
- Appropriate weather conditions for the application of the pesticide should prevail, otherwise the pesticide applications should be delayed.
- When hazardous pesticides such as restricted use pesticides or unlabeled pesticides are utilized, two employees should work together (one as a safety and remote from exposure). In case one becomes ill, the other can seek medical assistance. Use of radios or cellular phones will also meet this requirement. Emergency personal protective equipment (e.g., coveralls, respirators) must be available.
- When handling highly toxic pesticides (labeled with a skull and crossbones), sight or voice contact must be made at least every 2 hours.
- All precautions should be taken to avoid applying pesticides to sensitive areas such as apiaries, lakes, streams, pastures, houses, schools, playgrounds, hospitals, or sensitive

crops. Spills, runoff, or spray drift from the target area should be avoided by using care and caution and by following pre-approved plans.

- Prior to application, the equipment will be checked to make sure there are no leaks in the pump or tanks, hose connections, or worn spots in hoses. All spray tanks will have lids. Filling the spray tank will be done carefully so it does not run over. All machinery will be shut down if necessary to adjust or repair any moving parts. Never blow out nozzles, hoses, or clogged lines by mouth. Inspect all pesticide containers for leaks, tears, or holes before handling. Do not mishandle or abuse containers and thereby create hazards and/or emergencies by carelessness.
- When filling spray tanks with a hose, a properly functioning backflow device must be used to prevent contamination of the water source.
- All pesticides should be mixed in quantities which are adequate for the job to avoid excess diluted solutions after the job is completed. Cleanup procedures will be established at each location whereby excess sprays can be safely discarded, preferably by spraying the material on an over planting of the commodity. The equipment should be washed off, both inside and outside, and all pesticides and pesticide containers should be returned to a storage area immediately after use.
- At the end of the working day, employees who have applied or mixed pesticides should take a shower and change clothes. Clothing should be washed after the end of the day. In no case should the same clothing, including shoes, be worn on a second day after it has been worn during a pesticide application.
- If PPE is to be reused, it must be cleaned before each day of reuse in accordance with instructions from the PPE manufacturer unless the pesticide labeling specifies other requirements. If there are no other instructions, the PPE must be washed in detergent and hot water.
- Used PPE must be stored and washed separately from other clothing and laundry.
- Clean PPE must be stored away from other clothing and away from pesticide areas.
- People who clean and launder PPE must be informed that the PPE may be contaminated with pesticides, of the potential harmful effects of pesticides, how to protect themselves when handling PPE, and how to clean PPE properly.
- Respirator dust/mist filters must be replaced when breathing becomes difficult, when the filter becomes damaged or torn, when the respirator label or pesticide label requires (whichever is shorter), or in the absence of any other instructions or indications, at the end of a day's work.

- Vapor removing cartridges/canisters must be replaced when odor/taste/irritation is noticed, when the respirator label or pesticide label requires (whichever is shorter), or in the absence of other instructions or indications, at the end of a day's work.
- For persons who regularly handle organophosphates and/or large quantities of carbamates, a baseline cholinesterase level should be determined, followed by additional testing at least monthly throughout the pesticide application season.
- Do not permit unauthorized persons in the storage area.
- Do not store pesticides next to food, feed, seed, fertilizer, or other articles intended for consumption or use by humans or animals. Do not store food, beverages, tobacco, clothing, eating utensils, smoking equipment, or PPE in any area where pesticides are stored or handled.
- Do not drink, eat, smoke, apply cosmetics, or use tobacco in areas where pesticides are present.
- Wear unlined rubber gloves while handling containers and mixing or measuring pesticides.
- Do not put fingers in mouth or rub eyes while working with pesticides.
- Wash hands thoroughly with soap and water immediately after handling pesticides and especially before eating, smoking, or using toilet.
- Where large quantities of pesticides are stored, or where conditions may otherwise warrant, the local fire department should be provided with a floor plan of the storage area indicating where different pesticide classifications are regularly stored. The fire chief should be furnished with the home telephone(s) of the person(s) responsible for the pesticide storage facility.
- Pesticide storage areas should be properly ventilated.
- When anyone is poisoned or injured by pesticides, prompt transportation must be made available to an appropriate medical facility. The victim and medical personnel must be provided with:
 - The product name, EPA registration number, and active ingredients;
 - All first aid and medical information from the label;
 - A description of how the pesticide was used; and

- Information about the victim's exposure.

Disposal of Pesticides, Pesticide Containers, and Pesticide Contaminated PPE

Where employees are housed under the auspices of another organization, they should comply with that organization's requirements for handling, use, and disposal of agricultural chemicals.

Pesticides

- Follow label directions -- Use entire contents of container according to label directions (for purposes intended at prescribed dosage rates) provided these are currently legal under Federal, State, and local laws and regulations.
- Home and garden use pesticides -- If permitted, dispose of by securely wrapping individual containers in several layers of paper and discard in routine municipal solid waste disposal channels.
- Return to manufacturer or distributor -- This is a preferred route, especially for experimental compounds. Consider refusing experimental samples unless the company supplying them agrees in advance to accept unused material. Transportation must be according to all Federal, State and local laws and regulations. If possible, a representative of the manufacturing company should pick up the materials.
- Canceled pesticides -- EPA will accept for safe disposal, those pesticides, the registrations of which have been canceled after first having been suspended. This can usually be accomplished through your local pesticide distributor or the manufacturer. Requests for acceptance should be directed to EPA Regional Administrators after first contacting the local distributor and manufacturer. Canceled pesticides must be managed in accordance with 40 CFR part 273, Standards for Universal Waste Management.
- For pesticides that cannot be disposed of by procedures outlined above, it is strongly recommended that arrangements be made with a licensed waste disposal firm for regular pickups of pesticide waste.
- The disposal and storage of most waste pesticides (those for which no pesticidal use is intended) is now regulated by the Resource Conservation and Recovery Act (RCRA), as amended, of 1976. This act requires a hazardous waste generator identification number be obtained by generators of hazardous waste in excess of 1 kg/calendar month of acute hazardous waste (defined as having $LD_{50} < 50 \text{ mg/kg}$) as listed in 40 CFR Part 261.33 (e) and/or in excess of 100 kg/calendar month for other hazardous wastes. These requirements may vary

due to State or local laws and/or changes in RCRA. Further information should be sought from State and local authorities or the RCRA hazardous waste hotline (800-424-9346) or in the Washington, D.C. area (703-412-9810).

Empty Pesticide containers -- Segregate into the following categories and dispose of accordingly:

- Combustible containers (wood, cardboard, and paper) that contained organic or metallo-organic pesticides (except organic mercury, lead, cadmium, or arsenic compounds) -- Dispose of in pesticide incinerator or bury in specially designated landfill.
- Noncombustible containers (metal, glass, and plastic) that contained organic or metallo-organic pesticides (except organic mercury, lead, cadmium, or arsenic compounds) -- First triple rinse. Preferably, return to manufacturer for recycling. In order to dispose of after other measures have been exhausted, first puncture and crush rinsed container, then bury in a sanitary landfill permitted to accept this waste.
- Containers (combustible and noncombustible) that contained inorganic pesticides or organic mercury, lead, cadmium, or arsenic compounds -- First triple rinse and puncture. Dispose of rinsed containers in a sanitary landfill permitted to accept this waste.

Pesticide rinse water, unused spray solutions, and other dilute pesticide waste:

- Dispose of in the field by adding to spray mixtures and/or using per label directions. All pesticide solutions should be mixed with the intent of limiting the problem of excess solutions.
- If the above method is not used, treat these solutions the same as pesticides above.

Pesticide Contaminated PPE:

- Coveralls and other absorbent materials that are heavily contaminated with undiluted pesticide having a DANGER or WARNING signal word must be disposed in accordance with Federal, State, and local laws and regulations.

Additional information may be obtained from the National Pesticide Telecommunications Network (800-858-7378).

9. Summary of Responsibilities

The Administrator.

- Initiate and maintain a comprehensive and viable pesticide program consistent with the requirements set forth in applicable Federal, State, and local rules and regulations.
- Assure the necessary staffing, education/training, equipment, financial resources, and management support to develop and manage a comprehensive and effective Agencywide pesticide program.
- Provide leadership in support of the Agency pesticide program goals and policies.
- Establish procedures designed to ensure that no employee is subject to any interference, discrimination, or other type of reprisal for complying or attempting to comply with applicable Federal, State, or local rules or regulations.
- Ensure that pesticide program responsibilities are integrated within the performance standards of managers, supervisors, and employees as applicable.

Deputy Administrator, Associate Deputy Administrator, and National Program Leaders.

- Recommend actions that enable agencies to comply with the provisions of this P&P.
- Participate in Agencywide development of program implementation to ensure compliance with applicable Federal, State, and local rules and regulations.
- Include adequate funds for compliance with the provisions of this P&P.
- Provide review and comments as deemed necessary on this P&P.

Area Directors.

- Exercise primary responsibility to initiate, operate, and direct a comprehensive program which enables locations in their Area to comply with requirements of applicable Federal, State, and local rules and regulations.
- Provide the necessary staffing, education/training, equipment, financial resources, and management support for complying with provisions of applicable Federal, State, and local rules and regulations.
- Provide all supervisory personnel and employees immediate access to applicable Federal, State, and local rules, regulations and standards, and this P&P.

- Inform and hold subordinate supervisors responsible for implementing and monitoring the ARS pesticide program policies and procedures, ensuring that they and their employees are properly trained and prepared to carry out these responsibilities.

Center Directors, Location Coordinators, and Research Leaders.

- Implement, manage, monitor, and comply with all applicable Federal, State, and local regulations as they relate to the pesticide program.
- In consultation with scientists and the Area Safety and Health Manager, and where they exist, Location Safety and Health Committee, establish and maintain written operational procedures for the safe storage, handling, use, and disposal of agricultural chemicals at their location. These operational procedures will comply with the requirements and regulations of the U.S. Environmental Protection Agency and the Occupational Safety and Health Administration.
- Ensure that supervisors and employees are not subject to any interference, discrimination, or other type of reprisal for complying or attempting to comply with applicable Federal, State, or local rules or regulations.
- Develop training programs for all supervisors, pesticide applicators, handlers, crop advisors, agricultural workers, and other employees as appropriate, and submit them to the Area Safety and Health Manager for review.
- Arrange for the necessary training for those employees requiring certification or training under this P&P.
- Ensure that supervisors and employees have access to applicable Federal, State, and local rules, regulations, standards, and this P&P.
- Ensure that pesticide storage areas are managed in accordance with applicable Federal, State and local regulations.
- Ensure that supervisors develop a plan for responding to emergencies involving pesticides.
- Ensure that proper pesticide decontamination sites are established within 1/4 mile of pesticide workers and handlers.
- Ensure that supervisors of pesticide application display information for employees concerning pesticide operations at an easily seen central location.

- Ensure that supervisors notify the operator of an agricultural establishment, including those other than Agency property, prior to application of pesticides.
- Ensure that only trained handlers are allowed to make adjustments to or service pesticide handling equipment.

Supervisors.

- Monitor the storage, handling, use, and disposal of pesticides and containers and require employees at locations to follow the guidelines in this P&P.
- Arrange for medical tests as appropriate to monitor the health of employees who are exposed to pesticides as a part of their job responsibilities as specified in this P&P and the Occupational Health Maintenance Program.
- Ensure that personal protective equipment and clothing as specified on the pesticide label and in Manual 230.0, “Safety, Health, and Environmental Management,” and other safety devices are available and used by personnel involved in the storage, handling, use, and disposal of pesticides and containers, in cleaning protective clothing and devices, and that personnel are trained to use them properly.
- Ensure that employees required to wear respirators participate in a respiratory protection program.
- Ensure that pesticide application equipment is calibrated and is in proper working order.
- Ensure the annual monitoring of pesticide storage areas, mixing areas, and decontamination areas under their supervision to be certain that they conform to this P&P and to State and Federal regulations. Environmental monitoring can be obtained through the Area Safety and Health Manager and should be performed at least once each year for highly toxic chemicals.

Field Coordinators/Greenhouse coordinators.

- Ensure that records for field or greenhouse applications and pesticide inventories are being completed correctly.
- Ensure that the central information center is in full compliance with this P&P.
- Act as a contact person for information.
- Ensure that areas and greenhouses requiring posting are properly posted; and then un-posted when the required posting interval expires.

- Report all violations and deficiencies to the center director/location coordinator, or research leader.

Pesticide Handlers.

- Properly wear PPE as required by the label and ensure that the PPE is clean and in working condition, worn and used correctly, inspected before each day of use, and replaced or repaired as needed.
- Pesticide handlers required to use a respirator will participate in the Respiratory Protection Program.
- Take steps to prevent heat related illnesses (actions that can include taking sufficient breaks and drinking sufficient quantities of water).
- Change and store personal clothing and don PPE in the pesticide free area provided by their supervisor.
- Advise their supervisors when their safety equipment or supplies are low so that replacements can be ordered in advance of need.
- Ensure that all spray equipment is checked for leaks and malfunctions before filling with pesticides.
- Wear PPE when performing maintenance on, or repairing faulty equipment which may be contaminated with pesticides.
- Report all uncontrolled, accidental releases to the center director, location coordinator, research leader, or other person designated in the facility's written operational procedures.

Employees.

- Alert their supervisor immediately of any deviation from the prescribed standard operating procedures. It is the employee's responsibility to report spillage, improper ventilation, leakage, etc., to their supervisor as quickly as possible (within 24 hours).
- Ensure that the storage, use, handling, and disposal of pesticides and containers are managed so as to minimize risks to other employees, the general public, domestic animals, wildlife, and the environment.

10. Glossary

Agricultural chemical pesticide. A chemical pesticide used in agriculture.

Agricultural workers. Individuals (other than pesticide handlers) who cultivate and harvest plants on farms, in greenhouses, nurseries or forests, or who perform direct support activities.

Certified applicator. Any individual who is certified under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Section 4 (Use of Restricted Use Pesticides; Certified Applicators), as authorized to use or supervise the use of any pesticide which is classified for restricted use.

CFR. Code of Federal Regulations.

Container. Any package, can, bottle, bag, barrel, drum, tank, or other containing device (excluding spray applicator tanks) used to enclose a pesticide or pesticide related waste.

Crop advisers. Individuals who assess pest numbers or damage, pesticide distribution, or the status, condition, or requirements of agricultural plants. Examples of crop advisers are crop consultants, scouts, and integrated pest management monitors.

Early entry. The entry by a worker into a treated area after a pesticide application is complete, but before the Restricted Entry Interval has expired.

EPA. Environmental Protection Agency.

Excess pesticides. All pesticides for which there is no longer a need in experimental programs planned and supervised by scientists or for routine use.

Field coordinators. Employees that are assigned to coordinate pesticide application in fields, ensure appropriate pesticide storage, and to monitor policy compliance.

FIFRA. Federal Insecticide, Fungicide, and Rodenticide Act.

Greenhouse coordinators. Employees assigned to coordinate pesticide applications in greenhouses, ensure appropriate pesticide storage, maintain application records, and to monitor policy compliance.

Hazardous waste. A waste subject to the management and disposal regulations found in CFR Title 40, Parts 260-268 and Part 273.

Inorganic pesticides. Noncarbon-containing substances used as a pesticide.

Integrated Pest Management (IPM). A basic management tool and philosophy for managing pest populations and disease incidence while reducing the quantities and toxicity of pesticides used. Principals include: (1) scouting, or monitoring, for levels of pest disease occurrence; (2) emphasizing the use of the least toxic pesticide(s); (3) the optimal timing of pest control measures; and (4) the use of biological and cultural controls.

Material Safety Data Sheet (MSDS). A document that describes the physical and chemical properties of an agent, the physical and health hazards associated with an agent, safe methods of disposal, and precaution for safe handling and use prepared in accordance with 29 CFR 1910.1200 (g).

Metallo-organic pesticides. A class of organic pesticides containing one or more metal atoms in the structure.

Organic pesticides. Carbon-containing substances used as pesticides, excluding metallo-organic compounds.

Personal Protective Equipment (PPE). Apparel and devices worn to protect the body from contact with pesticides or pesticide residues.

Pesticide. (1) Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest or (2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

Pesticide category. The general classification into which a pesticide falls, e.g., organic phosphates, chlorinated hydrocarbons, metallo-organics (excluding organic mercury, lead, cadmium, and arsenic), metallo-organics containing mercury, lead, cadmium, arsenic, etc.

Pesticide handlers. Individuals that mix, load, transfer, or apply pesticides; handle open containers; clean or repair mixing, loading, or application equipment; act as a flagger; dispose of pesticides or unrinsed containers; assist with applications; and/or enter an enclosed area after pesticide application, but before Restricted Entry Interval termination.

Pesticide incinerator. Any EPA approved installation capable of the controlled combustion of pesticides at a temperature of 1000°C (1832°F) for 2 seconds dwell time in the combustion zone, or lower temperatures and related dwell times that will assure complete conversion of the specific pesticide to inorganic gases and solid ash residues. Such installation complies with the EPA Guidelines for the Thermal Processing of Solid Wastes as prescribed in 40 CFR, Part 240.

Pesticide label. A label required to be placed on all pesticide containers which provides information on the product and its use as required by 40 CFR, Part 156.

Pesticide waste. Any pesticide or diluted pesticide which is to be discarded.

Public building. Any building accessible to or near an area accessible to the general population.

Radiolabelled pesticides. A pesticide containing a radioisotope to mark a particular molecule or atom. Radiolabelled pesticides are covered in USDA's Radiation Safety Handbook, October 15, 1996, and are not a part of this P&P.

RCRA. Resource Conservation and Recovery Act.

Restricted Entry Intervals (REIs). The time period as designated on a pesticide label or MSDS which must expire before a person without protective clothing may enter an area or site at, in, or on which a pesticide has been applied.

Restricted use pesticide. A pesticide which, as specified on its label, can only be applied by a certified applicator or person under the direct supervision of a certified applicator.

Sanitary landfill. A disposal facility¹ employing an engineered method of disposing of solid wastes on land in a manner which minimizes environmental hazards by spreading the solid wastes in thin layers, compacting the solid wastes to the smallest practical volume, and applying cover material at the end of each working day.

Seal. To enclose a pesticide and its container, if appropriate, in an impervious container made of plastic, glass, or other suitable material which will not be chemically degraded by the contents. This container then should be sealed within a durable container made from steel, plastic, concrete, or other suitable material of sufficient thickness and strength to resist physical damage during and subsequent to disposal or storage.

Signal word. The word appearing on a pesticide label which describes the approximate toxicity. Each label must bear the appropriate signal word: DANGER, WARNING, or CAUTION.

Specially designated landfill. A landfill² in which complete long-term protection is provided for the quality of surface and subsurface waters from pesticides, pesticide containers, and pesticide related wastes deposited therein, and against hazard to public health and the environment. Such sites should be located and engineered to avoid direct hydraulic continuity with surface and subsurface waters, and any leachate or subsurface flow into the disposal area should be contained within the site unless treatment is provided. Monitoring wells should be

¹Such facility complies with the EPA Guidelines for the Land Disposal of Solid Wastes as prescribed in 40 CFR, Part 241.

²Such facility complies with the EPA Guidelines for the Land Disposal of Solid Wastes as prescribed in 40 CFR, Part 241.

established and a sampling and analysis program conducted. The location of the disposal site should be permanently recorded in the appropriate local office of legal jurisdiction.

Treated Area. Any area or medium to which a pesticide is being directed or has been directed.

Triple rinse. The flushing of containers three times, each time using a volume of normal diluent equal to approximately 10 percent of the container's capacity, and adding the rinse liquid to the spray mixture.

Toxic. A substance or mixture of substances that can cause adverse effects to humans, animals, plants, or the environment.

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