

6. SITE INSPECTIONS BY PPSP



6. SITE INSPECTIONS BY PPSP ■

6.1 INTRODUCTION

Most poisoning events can be investigated simply through a telephone interview with the poisoned subject, combined with additional information gleaned from medical records and investigation reports from enforcement agencies. In some instances, however, a site inspection by the PPSP may be necessary. The process for initiating an inspection depends on the agency's authority to access the type of site involved. Section 2.5.1.9 *Authority to Investigate* discusses this in more detail. It's worth remembering that site inspections are very resource intensive.

In most States with established PPSPs, investigations are conducted by program staff based in the centralized State office. The geographic location of these surveillance programs can present a significant drawback when conducting site inspections, since travel can take a significant amount of time. In contrast, the Washington State program has sufficient staff to base investigators in several areas of the State.

Each PPSP must set its own criteria for what triggers a site inspection, bearing in mind that specific mandates may need to be followed. These mandates may be established by a funding source, the demands of special projects, or general requirements of the disease reporting rules in the State. Criteria used to trigger a site inspection may include the following:

- All deaths from nonintentional exposure
- All hospitalizations from nonintentional exposure
- Four or more ill persons associated with a single exposure event

- An unusual temporal clustering of three or more reports associated with a particular pesticide product (especially those newly on the market), ingestion of pesticide-treated food, a pesticide device, or a particular workplace/employer
- Incidents involving a pesticide, class of pesticide, type of application, or industry selected by the surveillance program for special emphasis

Obtaining the cooperation of the affected persons and the employer or owner of the exposure site is critical if an inspection is conducted. The surveillance program must develop protocols covering whether employers will receive advance notice prior to inspections. This decision is usually based on whether the agency has a clearly mandated enforcement responsibility for any facet of the State's implementation of the Occupational Safety and Health Act (OSH Act) or FIFRA. If the surveillance program functions outside those acts, the program investigators may decide to offer inspections as a form of free consultative service to the employer, business owner, or home owner. In these cases, an advance phone call may help establish the foundation for a cooperative relationship. If the primary purpose of the inspection is to obtain a completely unbiased view of the operation, it may be more useful to perform unannounced site visits. This may not be feasible, however, unless conducted jointly with an enforcement agency.

If the program does not have a formalized authority to investigate, a pre-established plan of action should be in place to handle inspection refusals. The carrot-and-stick approach is

often effective. The agency can discuss the benefits of allowing an inspection on a cooperative basis, namely that the investigator will provide information and assistance in preventing exposures. The owner or employer may avoid a formal referral to an enforcement agency by agreeing to correct the hazards identified during the inspection. Care should be taken to ensure that the employer understands the voluntary nature of the inspection, and what actions will be taken if an imminent danger situation is identified. Other items that should be explained include the following:

- The scope of the inspection
- An explanation of what information will be held confidential, if any
- What types of actions will be taken when problems are identified
- Inability of the inspection to identify all hazards or violations of good practice
- An explanation that cooperating with the inspection and/or following recommendations made in the inspection report will not exempt the employer or worksite from an enforcement inspection or complying with relevant regulations
- The information that will be provided at the end of the inspection and to whom it will be provided

It is a good idea to develop standard language covering these elements and to provide it in writing both at the beginning of the inspection and in the final report.

In some situations, PPSP staff may choose to conduct site inspections simultaneously with the enforcement agency, depending on the relationship between agencies. Employers can feel

besieged when multiple agencies conduct separate inspections at different times since these activities disrupt normal work activities. Alternatively, the PPSP may prefer to keep its inspections separate to prevent confusion with another agency's mandates, or to maintain a different relationship with the owner of the establishment and the exposed persons. In these cases, the investigator must be able to explain why the PPSP inspection is different, what is being evaluated, and what type of information will be provided to the employer and employees at its conclusion. (Site inspections of nonoccupational exposures involve similar issues with landlords, public buildings, neighboring property owners, and retail establishments.)

PPSP staff may be contacted during emergency response events, such as spills or fires involving pesticides. Programs should have policies to address staff roles in these circumstances. Any on-site work during these events requires that staff have the proper level of safety and health training and PPE.

6.2 GETTING STARTED WITH THE INSPECTION

Attire for site inspections should be appropriate for the type of establishment. Failure to dress accordingly will hinder the investigator's ability to establish a credible working relationship with all of the persons involved in an exposure event.

The investigator should begin by introducing him- or herself by name, title, and organization, and presenting appropriate credentials. The purpose for the visit should be provided next. The investigator should meet with company and worker representatives to discuss the timetable and purpose of the visit and to obtain information about the exposure event.

6.3 SITE WALK-AROUND EVALUATION

The purpose of the walk-around inspection is to gather information to

- Evaluate the relationship between the reported illness and the pesticide exposure
- Identify potential safety and health hazards related to pesticide use in the home or workplace
- Document the exposure
- Observe the activities of affected and other potentially exposed persons
- Identify changes in policies or procedures that will help prevent the recurrence of a similar exposure event.

It is useful to diagram the site where the exposure occurred and indicate the location of any windows and ventilation ducts. Another helpful step is to review relevant written policies, training program materials and records, and the injury and illness log. Finally, investigators should obtain multiple perspectives for why the exposure event occurred. In occupational exposures, that includes the exposed worker(s) and either their employer or supervisor.

Some programs conduct only limited worker interviews during a site inspection. Others conduct those interviews only at the worker's home, by telephone, or at a neutral place outside of work hours. In most situations, in-depth worker interviews are most effective when conducted away from the workplace. At the workplace, time spent talking with investigators may compromise the confidentiality of the exposed worker, decrease the worker's earnings (especially in agricultural settings), or make it difficult for the worker to provide as much information as might be possible away from work.

6.4 EQUIPMENT FOR SITE INSPECTIONS

6.4.1 CAMERA

A camera is indispensable for quick documentation of the site layout, but photos need to be augmented by notes, diagrams, and measurements. Photographs can help document the state of repair of application equipment, PPE, or pesticide product storage. Photographs are also useful in documenting sampling sites. (Sampling equipment is described in Section 6.5.) When photographing workers, consider how the photographs will be used. Formal consent should be obtained if the worker will be identifiable. As a courtesy, explain to workers how the photographs will be used even if the workers will not be identifiable.

6.4.2 PPE

The information provided here is general and is designed to serve as a reminder to State programs that they need to address issues of staff safety and health. It is extremely important that staff conducting inspections are equipped with appropriate PPE for the types of situations they will be evaluating. If there is any doubt about the safety of entering a particular area with the level of PPE available, the inspection should be terminated until appropriate PPE is obtained. All staff evaluating pesticide illnesses must be in compliance with all safety and health rules for their own protection and to protect the credibility of the program. Guidelines for appropriate PPE should be reviewed by the agency's safety and health officer or other appropriate staff to ensure compliance with occupational safety and health laws. Staff should be properly fit-tested for respiratory protection devices. (Guidelines for fit-testing and medical evaluation for use of respiratory protection are included in the OSHA Respiratory Protection Standard [29 CFR 1910.134]).

The minimum equipment that should be available for inspections is as follows:

- Chemical resistant boots (polyvinyl chloride [PVC], nitrile, or similar material)
- Half-face cartridge respirator or powered air purifying respirator (PAPR) equipped with cartridges appropriate for the hazard (usually a combination organic vapor cartridge with a dust filter)
- Unlined gloves of nitrile or butyl rubber
- Steel-toed rubber boots
- Plastic bags for transporting PPE that may be contaminated during an inspection
- Any necessary sampling equipment and containers for transporting samples

6.4.3 WATER

Staff should carry sufficient water to ensure proper hydration if working in a hot environment. Water should also be available for decontamination when staff members are observing pesticide mixing, loading, or application activities.

6.4.4 CONTACT FORM

Since inspections are frequently conducted in remote areas, it is helpful to have staff complete a simple contact form prior to leaving the office. The form should identify the location of the inspection site, the staff departure time, the expected return date and time, and a checklist of PPE to be taken to the inspection site (see Appendix C).

6.5 SAMPLING

This manual provides general information about sampling. Sources for more detailed instructions on sampling and laboratory pesticide analyses are described in this section. Several types of sampling are appropriate for

ascertaining whether exposure occurred or was probable, whether pesticide was absorbed, and whether changes in biologic function took place as a result of exposure. In most situations, PPSPs do not have adequate funding and staff to conduct routine environmental or biological sampling. Sampling is most often conducted as part of enforcement inspections by agencies that have jurisdiction over pesticides or occupational health. The sampling carried out by these agencies is typically aimed at determining whether a code violation occurred. This may be different from the sampling desired by a public health agency aimed at ascertaining whether a person was exposed to sufficient pesticide to suffer health problems, or whether use of a product according to the label may cause adverse health effects.

State enforcement agencies may maintain sampling guides or manuals. PPSPs should review these if they plan to conduct their own site sampling or use sampling results from the State enforcement program. NIOSH, OSHA, and EPA maintain manuals of analytic methods for a broad range of chemicals including pesticides [NIOSH 1994; OSHA 2000; EPA 2000a]. Chapter 13 and Appendix A of the FIFRA Inspection Manual [EPA 2002] also contain procedures for collecting residue and environmental samples.

Pesticide manufacturers can be a useful source of information about sampling methodologies for their products. Their industrial hygienists can provide useful information about sampling methods and data from the company's exposure analyses. They are also a good source for information about decontamination procedures following significant spills or misapplications of their products.

With the exception of equipment for surface wipe sampling, most sampling protocols require an investment in equipment for sampling and

calibration. It is possible to rent or develop a system for borrowing equipment that will not be used frequently. If sampling is not conducted regularly by experienced staff, sampling measurements may be inaccurate due to various sampling errors. PPSPs that do not conduct regular sampling may choose to arrange for it to be conducted by a sister agency (e.g., an enforcement agency) through an interagency agreement.

6.5.1 SAMPLE COLLECTION

The sample collection strategy is dictated by the purposes for obtaining the samples and the circumstances of the exposure. The date, time, and environmental conditions of sampling must be carefully recorded. Storage and handling of the sample must be documented.

Residue samples are typically the most common types of samples encountered in health inspections. These involve obtaining samples of plant material, animal tissues, water, soil, wipes of hard surfaces, or samples of contaminated fabric, air, runoff water, etc. At times, samples may be taken to determine whether the tank mix and/or dilution of pesticide was appropriate according to the product label or to identify an unknown pesticide product.

In the case of drift exposures, it is useful to take residue samples on the actual site where the application was intended. The area from the site of the application to the site where affected persons were exposed should be divided into grids. A series of samples is then taken in each grid, moving from the site of application to the site of exposure. Samples of soil or foliage are most

commonly used to document drift. Wipe samples taken from vehicles or building structures may also be useful for documenting drift exposures. Contaminated clothing may be collected, although analysis is often more difficult.

Sampling pumps must be carefully calibrated before and after any air sampling. Indoor air samples must address issues of potential interference from other indoor air contaminants. In residential exposure situations, samples should be taken under the same conditions that existed at the time the person was exposed (e.g., with respect to heat and ventilation). In addition, samples should be taken under a worst-case scenario with heat on or air conditioning off to determine any ongoing hazard from exposure in the residence.

If biological specimens such as blood or urine are collected, it is critical that the analytical laboratory be contacted ahead of time. The laboratories' instructions about sample collection media, preservatives, storage conditions for transport, and shipping must be carefully followed.

6.5.2 SAMPLE PREPARATION CUSTODY AND HANDLING

The investigator should carry clean sampling materials, container seals, and preservatives as needed. Proper care of the sample during transport is critical for sample integrity. Chain of custody should be documented using a standard form. The manuals described earlier have examples, as do State enforcement agencies. The laboratory that will be receiving the sample may require a chain of custody form.