

# State of West Virginia Field Sampling Team Standard Operating Procedures (SOP)



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## Background

The Field Sampling Team Standard Operating Procedure (SOP) was prepared to assist the West Virginia Radiological Sampling Teams in collecting samples such as fruit, vegetables, game, and other items for laboratory analysis in the event of a contamination incident involving nuclear materials. This SOP covers collection techniques, packaging samples for transport, documentation, cross-contamination safeguards and waste control.

## Overview

There is one 50-mile radius Ingestion Exposure Pathway Emergency Planning Zone (EPZ) associated with a nuclear power plant affecting the State of West Virginia. The Beaver Valley Power Station affects four (4) counties in the northern panhandle of West Virginia. Hancock County is in both the 10-mile Plume Emergency Planning Zone (EPZ) and the 50-mile Ingestion Exposure Pathway EPZ. Brooke County and Ohio County are wholly in the 50-mile Zone and Marshall County is partially in 50-mile Ingestion Exposure Pathway EPZ.

- The State of West Virginia accepts the planning guidance of the Food and Drug Administration (FDA) concerning emergency action levels for dealing with accidental radioactive contamination of human food and animal feeds. *Note: The FDA guidance was published August 13<sup>th</sup>, 1998.*
- The West Virginia State Recovery Task Force will use the FDA guidance in making its recommendation to the Governor of the State of West Virginia.

## Responsibilities

Field sampling team responsibilities during an emergency involving nuclear materials include:

- The collection of samples within the area affected by the radiological release from BVPS
  - To determine if contamination of plants or animals has occurred or is present
  - To determine if radiation levels remain within permissible limits for ingestion
  - To determine which foods exceed permissible limits for radiation
- Collecting data for actions taken by the State Recovery Task Force (SRTF) including, but not limited to, issuance of embargoes or restrictions or public precautionary actions involving the consumption, sale, transport, or processing of foods.

These procedures do not provide for radiological contamination control techniques or address exposure control. Overseeing the actions related to these activities is the responsibility of the escorts who shall accompany field sampling teams, if assignments include restricted areas where exposure limits exceed those established for occupancy by the general public. Field sampling team procedures attempt to minimize cross-contamination in all areas where sampling occurs.

## General Operations

A field sampling team should be made up of two or more persons, one person to actually perform the sampling operations, while the second provides instructions and directions from the Field Sampling Team SOP. These procedures provide a basis for control of cross-contamination of samples since the majority of the sampling performed by the sample teams is within the 50-mile Ingestion EPZ.

Sampling teams **must** stay below a total accumulative dose of **5 rem TEDE with an administrative limit at 1R or 0.5R/hr**. Escorts from the Field Team Center, established near the accident site and operated by the Division of Homeland Security and Emergency Management (DHSEM), will provide instruction and continuous supervision on the use of the following:

- Dosimetry to measure personnel exposure
- Protective clothing
- Respirators, if levels of re-suspension warrant use.

In addition, the escort will advise the sampling team on contamination control techniques and provide instrumentation to check sampling kit equipment for contamination after each use. The escort and team will proceed with samples to a Sample Reception Site and proceed through sample reception, monitoring, and decontamination (if needed).

## Concept of Operations

The State Emergency Operations Center (SEOC) will activate assessment personnel through the Bureau of Public Health (BPH), when it has determined that a radioactive release involving a fixed nuclear facility has occurred and may affect West Virginia.

Assessment personnel from BPH will determine the operational location for the Sample Reception site, after conferring with the Division of Homeland Security and Emergency Management (DHSEM) and assessing the possibility of co-location with the Field Team Center (FTC), and dispatch personnel to establish the Sample Reception Site.

The State Recovery Task Force (SRTF) will use accident assessment information, meteorological data (from the date of the incident), flyover information provided by federal assets, and information provided by local authorities to determine:

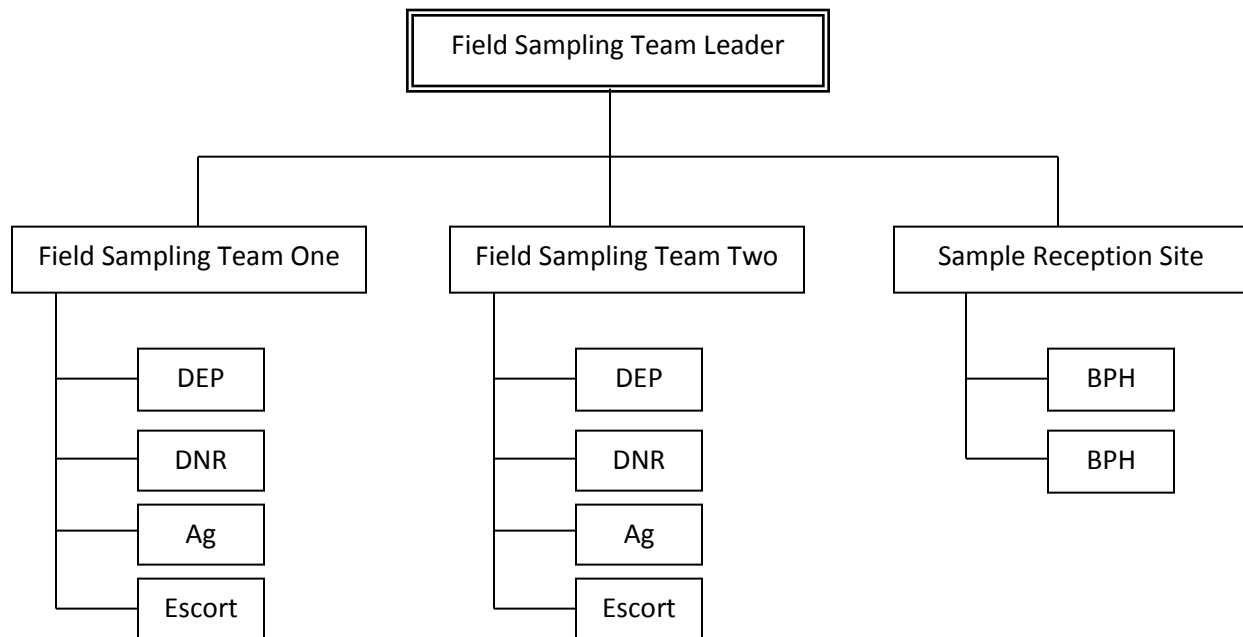
- Types of samples required
- Number of each sample type required
- Approximate locations for each sample type.

Based on the above requirements, the SRTF will instruct the Sample Reception Site via the Field Team Center (FTC) on sample requirements.

The SRTF will instruct the Sample Reception Site Coordinator on delivery location of the samples to the Ohio Department of Health for analysis on a daily basis or as needed.

Assessment personnel will make protective action recommendations to the SRTF based on the results from the laboratory analysis, using Food and Drug Administration (FDA) and Environmental Protection Agency (EPA) protective action guidance and the EPA Clean Water Act.

## Composition



*This illustration is to serve as an example of composition field sampling teams. It is not intended to require agencies to participate in field sampling teams or intended to be all inclusive of all situations. Each type of sample will require different agencies to provide expertise in specific subject matter.*

## Common Field Sampling Procedures

Before leaving for destination:

- Obtain radio(s) and extra batteries from Field Team Center. Receive briefing on radio functions and protocol. Verify cell phone and FTC phone numbers.
- Inspect sampling kit to ensure its completeness and that all equipment and supplies are available
- Check all survey meters to be used to ensure they are operational and calibrated
- Receive dosimetry briefing from Bureau of Public Health. At a minimum, the briefing will include information on how to read the dosimeter, how dosimeters are to be worn (expedient pocket on tyvek suit with duct tape), how often dosimeters should be read, and turn-back limits (currently 1R or 0.5R/hr)
- Put on protective clothing (tyvek coveralls, gloves, shoe covers)
- Begin Sample and Laboratory Data Sheet with information from Field Team Center

Upon arrival at sampling location:

- Radio Field Team Center of arrival and advise property owner of purpose of sampling.
- Conduct sampling and measurements and record information onto Sample and Laboratory Data Sheet.
- Notify Field Team Center of completion of sample and estimated time of travel to proceed to next sample location or to sample reception site.

