

**Guide to Handling Investigation-Derived Waste**

SSFL SOP 13

Revision: 1

Date: November 2012

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Signature/Date**1.0 Objective**

This technical standard operating procedure (SOP) presents guidance for the management of investigation-derived waste (IDW) generated at the Santa Susana Field Laboratory (SSFL) site during soil sampling, trenching, and equipment decontamination activities. The primary objectives for managing IDW during field activities include:

- Leaving the site in no worse condition than existed before field activities
- Removing wastes that pose an immediate threat to human health or the environment
- Segregating radiological wastes above background or "permissible" concentrations
- Complying with federal, state, local, regulations
- Minimizing the quantity of IDW

**2.0 Background****2.1 Definitions**

**Hazardous Waste** - Discarded material that is regulated listed waste, or waste that exhibits ignitability, corrosivity, reactivity, or toxicity as defined in 40 CFR 261.3 or state regulations.

**Investigation-Derived Wastes** - Discarded materials resulting from field activities such as sampling, surveying, drilling, excavation, and decontamination processes that, in present form, possess no inherent value or additional usefulness without treatment. Wastes will be personal protective equipment, (e.g., nitrile gloves, paper towels, polyethylene sheeting) and decontamination fluids that may be classified as hazardous or nonhazardous.

**Mixed Waste** - Any material that has been classified as both hazardous and radioactive.

**Radioactive Wastes** - Discarded materials that are contaminated with radioactive constituents with specific activities in concentrations greater than the latest regulatory criteria (i.e., 10 CFR 20).

**Treatment, Storage, and Disposal Facility (TSDF)** - Permitted facilities that accept hazardous waste shipments for further treatment, storage, and/or disposal. These facilities must be permitted by the U.S. Environmental Protection Agency (EPA) and appropriate state and local agencies.

**2.2 Discussion**

Field investigation activities result in the generation of waste materials that may be characterized as hazardous or radioactive. IDWs may include solutions from decontaminating sampling equipment; and other wastes or supplies used in sampling and testing potentially hazardous or radiological contaminated material. Personal protective equipment (PPE) and other solid waste (paper towels, plastic sheeting, etc) are not considered IDW. DPT cuttings, excess sample spoils, and excavated soil will be returned to the borehole/excavation and are not considered IDW.

**3.0 General Responsibilities**

**Field Team Leader**-The field team leader (FTL) is responsible for ensuring that field personnel conduct field activities in accordance with this SOP and the Field Sampling Plan (FSP) Addendum.

**Field Team Members**-Field team members are responsible for implementing this SOP and communicating any unusual or unplanned condition to the FTL's attention.

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**Site Health and Safety Technician**—The person who will use field screening instruments to monitor all field activities for VOCs and radiological contaminants and pre-shipment sample coolers. This person is a trained radiological technician who works under the guidance of Science Application International Corporation's (SAIC's) Certified Health Physicist (CHP).

### 4.0 Required Equipment and Handling

#### 4.1 IDW Containment Devices

Currently, the anticipated IDW containment device is:

- Department of Transportation (DOT)-approved 55-gallon steel containers (drums)

#### 4.2 IDW Container Labeling

An "IDW Container" label shall be applied to each drum using indelible marking. Labeling or marking requirements for IDW are as detailed below.

- The Site Health and Safety Technician will screen all containers for radioactivity using hand-held field instruments.
- Include the following information on labels and markings: project name, generation date, location of waste origin, container identification number, sample number (if applicable), and contents (i.e., decontamination water).
- Apply each label or marking to the upper one-third of the container at least twice, on opposite sides.
- Position labels or markings on a smooth part of the container. The label must not be affixed across container bungs, seams, ridges, or dents.
- Use weather-resistive material for labels and markings and permanent markers or paint pens capable of enduring the expected weather conditions. If markings are used, the color must be easily distinguishable from the container color.
- Secure labels in a manner to ensure that they remain affixed to the container.

Labeling or marking requirements for hazardous (or radioactive) IDW expected to be transported offsite must be in accordance with the requirements of 49 CFR 172 (not anticipated for this work). Wastes determined to be hazardous or radioactive will be staged onsite until disposal options are determined by Department of Energy (DOE) or The Boeing Company (Boeing). Boeing will notify the California Department of Toxic Substances Control of disposal in accordance with Boeing's RCRA permit. Contact information is provided in the health and safety plan.

#### 4.3 IDW Container Movement

Predetermine staging areas for IDW containers in accordance with SSFL requirements. Determine the methods and personnel required to safely transport IDW containers to the staging area before field mobilization. Handling and transport equipment will be consistent with the associated weight for both lifting and transporting. Transportation of IDW containers offsite via a public roadway is prohibited unless 49 CFR 172 requirements are met.

Wastes determined to be hazardous or radioactive will be handled as directed by DOE or Boeing and segregated from standard IDW and solid wastes.

#### 4.4 IDW Container Storage

Stage containerized IDW awaiting results of chemical analysis at a pre-determined location on the SSFL site. Store containers such that the labels can be easily read. Provide a secondary/spill container for liquid IDW storage (e.g., steel drums shall not be stored in direct contact with the ground).

### 5.0 Procedures

All liquid IDW generated at the site will be disposed offsite. The field screening and chemical analyses will determine the ultimate disposition of the waste. Formal plans for the management of IDW will be determined by CDM Smith and submitted to DOE, Boeing, and DTSC for approval. Interim management of IDW is discussed below.

#### 5.1 Collection for Offsite Disposal

Radiological screening and laboratory analysis are required before sending any IDW to an offsite TSD or to a publicly owned treatment works (POTW). Manifests are required to accompany any IDW determined to be hazardous, and DOE

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will direct the handling of this material. Arrange with DOE and/or Boeing who are responsible for the site and signing as generator on any waste profile and all manifests or bill of lading; it is CDM Smith's policy not to take ownership of the waste, but may sign waste profiles or manifests on behalf of DOE or Boeing, as an authorized contractor. Use permitted TSDFs and transporters for the respective wastes. Non-bulk containers (e.g., drums) must have a DOT-approved label affixed to the container and all required associated placard stickers before leaving SSFL for an offsite TSDF. Include information as required in 49 CFR 172.

### 5.1.1 Aqueous Liquids

Store used decontamination fluids in appropriate containers (e.g., 55-gallon drums) at a pre-designated staging area at SSFL. Prior to being disposed offsite by a disposal vendor, ship a sample of the fluids for laboratory analysis.

### 5.2.2 Disposable PPE and Other Solid Waste

Dispose of personal protective equipment and other solid waste (paper towels, plastic, etc.) offsite as solid waste. After screening for radioactivity, these wastes may be contained in standard plastic trash bags and placed in trash cans.

## 6.0 Restrictions/Limitations

The project managers will determine the most appropriate disposal option for solid waste and used decontamination fluids. Parameters to consider, especially when determining the level of protection, include the volume of IDW and the level of contaminants present in the surface and subsurface soils. Under no circumstances will IDW materials be stored in a site office or warehouse.

## 7.0 References

Title 49 Code of Federal Regulations, Department of Transportation. 2005 or current revision. *Hazardous Materials Table, Special Provisions, Hazardous, Materials Communications, Emergency Response Information, and Training Requirements*, 49 CFR 172.

U. S. Environmental Protection Agency (EPA).1990. *Low-Level Mixed Waste: A RCRA Perspective for NRC Licensees*, EPA/530-SW-90-057. August

\_\_\_\_\_. January 1992. *Guide to Management of Investigation-Derived Wastes*, 9345.3-03FS.