

State of Rhode Island
Department of Environmental Management
Division of Site Remediation

Policy Memo 95-01

Guidelines for the Management of Investigation Derived Wastes

1.0 Purpose

The purpose of this policy memo is to provide guidance regarding the management of potentially contaminated materials generated during environmental site investigations, pilot tests, and interim remedial actions (hereafter referred to as investigatory activities) conducted on property in Rhode Island. It is the intent of the Department that the management of investigation derived wastes (IDW) be:

- protective human health and the environment, and accordingly result in no additional site related risks than existed prior to investigation activities;
- cost effective, consider the likely site remedy and consider waste minimization techniques; and
- done in a manner consistent with all applicable or relevant and appropriate requirements to the extent practicable.

The management of IDW should recognize that investigatory activities are not considered comprehensive remedial actions, and therefore final management of most materials encountered during these activities should be postponed to the extent feasible until a final site remedy has been determined.

The potential problems of managing IDW should be a factor in choosing an investigative method. Project managers should strive to minimize the generation of IDW to reduce the need for special storage or disposal requirements that may result in substantial additional costs yet provide little or no reduction in site risks relative to the final remedial actions.

It is important to note that for all investigatory activities in areas which have the potential to encounter a listed hazardous waste stream, all IDW originating from the area of concern must be managed in accordance with the Department's Rules and Regulations for Hazardous Waste Management.

The regulated community may use the management and storage methods outlined in this memo or submit, for review and approval, alternative IDW management proposals on a site-specific basis. The Division reserves the right to require additional IDW handling procedures as it deems necessary.

2.0 Classes of IDW

For the purpose of this policy memo, IDW are separated into the following four classes:

- A. **Solid** – includes unsaturated soils, soil saturated with water, and pre-existing solid wastes;
- B. **Liquid** – includes groundwater, drilling water, and decontamination rinsate;
- C. **Liquid Wastes and Associated Saturated Solids, and Buried Containers** – includes liquid wastes, any solids saturated with liquid wastes (i.e. a matrix containing greater than 1% liquid waste), and buried containers such as drums, electrical transformers, electrical capacitors, unexploded ordnance, and any other type of container which could potentially contain a hazardous substance; and
- D. **Personnel Equipment** – includes equipment and supplies, which are not reusable upon completion of current site activities (such as personal protective equipment and disposable sampling equipment).

3.0 IDW Management Guidelines

The Department recommends the following management guidelines (arranged by IDW class) for initial handling, segregating, storage and disposal of IDW.

3.1 Solid

These guidelines pertain to any investigatory activities, which generate solid IDW, including but not limited to excavations such as boreholes, trenches, and test pits.

- A. All intrusive investigatory activities should be observed for evidence of buried containers or liquid waste saturated solids.
- B. The preferable management alternative for all solids extracted from a site is replacement back into the same excavation from which it originated, however, consideration should be given to the likely site remedy prior to taking this action.
- C. Upon excavation, all solid IDW should be placed on low permeability synthetic sheeting of thickness no less than 10 mils. No material should be stored on synthetic sheeting for a period greater than 48 hours without receiving prior division approval. All solids stored on synthetic sheeting should be covered with similar material during all period when excavation work is not being conducted in that area of concern.
- D. When refilling excavations, the original stratigraphy of the area should be maintained to extent feasible. If the excavation is such that it is not possible to entirely refill the excavation, as in the case of a monitoring well placement, the excess solids should be managed in accordance with section 3.1(C) and (E) of this policy memo unless an alternative management plan has been

approved. Under no circumstances shall solid IDW from one area of concern be disposed of in a different area of concern without prior Division approval.

- E. Long-term storage of solids (typically period greater than 48 hours) should be in secure containers, which are suitable for potential off-site disposal (for example: roll-off dumpsters or 55-gallon drums). The contents of the containers should be characterized to determine the appropriate treatment or disposal method in a manner approved by the Division and consistent with the contaminants of concern at the site. This characterization can utilize either site investigation samples or samples whose sole purpose is to characterize the IDW.

3.2 Liquid

The following guidelines pertain to any investigatory activities, which generate liquid IDW; including, but not limited to, groundwater monitoring well development and sampling, and decontamination procedures. Aquifer pump tests are beyond the scope of this policy memo and require specific Department review and approval.

- A. All liquid IDW, which has been extracted from a site, must be stored in a secure container suitable for off-site disposal, and its contents properly characterized by Division approved laboratory analysis methods for all contaminants of concern at the site to determine the appropriate treatment or disposal method. These analysis methods should be consistent with those proposed for the site investigation work plan. This characterization can utilize either site investigation samples or samples whose sole purpose is to characterize the IDW.
- B. Storage of all liquid IDW should be in a segregated manner (liquid which has been taken from the site, by area of concern, from decontamination liquid).
- C. All non-decontamination liquid IDW that meets the groundwater quality standards for the subject property's groundwater classification, as stated in the Department's Rules and Regulations for the Groundwater Quality may be disposed of on-site. Liquid, which exceeds these criteria, shall be handled on a case-by-case basis. If it is anticipated that there will be exceedances of any groundwater quality standard at the site, the investigation work plan should contain a proposed management plan for this IDW.
- D. The disposal criteria for all non-decontamination liquid IDW containing contaminants for which there are no RIDEM groundwater quality standards must be proposed and approved on a case-by-case basis. Alternative criteria for each contaminant may be proposed as concentrations of individual contaminants or groups of contaminants (i.e., total concentration of volatile organic compounds) below which there will be no demonstrated additional adverse risk to human health or the environment.
- E. The preferred alternative for all liquid IDW generated as a result of decontamination procedures is disposal on site.

- F. Liquid IDW, which, in accordance with this memo, can be disposed of on-site, should be spread uniformly over a relatively level uncontaminated portion of the site. The on-site disposal of liquid IDW may not lead to increased migration of contaminants from the site nor impact a surface water body, wetland, or neighboring property to any degree, and must infiltrate the ground surface. If the volume of liquid IDW generated during a single investigation is expected to exceed 250 gallons, Division approval is required prior to any on-site disposal.

3.3 Liquid Wastes and Associated Saturated Solids, and Buried Containers

The following guidelines pertain to any investigatory activities which could potentially generate liquid wastes and associated saturated solids, or encounter buried containers, including but not limited to excavation such as boreholes, trenches and test pits.

- A. Investigations in areas, which are likely to encounter liquid wastes and associated saturated solids or buried containers, should include a contingency plan for proper handling and disposal of these wastes in the investigation work plan.
- B. The Division of Site Remediation should be contacted immediately upon the discovery of liquid wastes and associated saturated solids or buried containers for all projects which do not have a Division approved contingency plan for addressing this class of IDW.
- C. All liquid wastes and associated saturated solids extracted from a site should be stored in secure containers suitable for potential off-site disposal, and managed in accordance with the Department's Rules and Regulations for Hazardous Waste Management and/or the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases as appropriate. Liquid wastes and associated saturated solids extracted from a site must be properly characterized by Division approved laboratory analysis methods for all contaminants of concern, and as necessary to determine the proper treatment or disposal method. Under no circumstances shall liquid wastes and associated saturated solids from one area of concern be disposed of in a different area of concern without prior Division approval.
- D. All buried IDW should be extracted from its excavation upon Division approval. This approval may take the form of an approved contingency plan or an incident specific approval by Division personnel. Following extraction, buried containers should be stored in a manner which provided secondary containment for 110% of the container's volume, and managed in accordance with the Department's Rules and Regulations for Solid Waste Management Facilities, and/or the Department's Rules and Regulations for Hazardous Waste Management as appropriate. The contents of any buried containers must be properly characterized by Division approved laboratory analysis methods for all contaminants of concern, and as necessary to determine the proper treatment or disposal method. Under no circumstances should be extracted container not its contents be disposed of on site.

- E. Unexploded ordinance encountered and/or extracted from a site must be managed on a site-specific basis under the direction of personnel from the State Fire Marshal's Office, the appropriate municipal Fire Department, and the Division of Site Remediation.

3.4 Personnel Equipment

All personnel equipment IDW should be ultimately disposed of off-site and must be managed in accordance with the Department's Rules and Regulations for Solid waste management Facilities or the Department's Rules and Regulations for Hazardous Waste Management, as appropriate. Under no circumstances should personnel equipment IDW be disposed of on site.

4.0 IDW Storage Guidelines

The investigation work plan must include provisions for the proper storage and security of IDW in the time period between the generation of the material and the determination of the appropriate treatment or disposal method. The Department recommends the following procedures for the management and storage of IDW.

- A. All IDW, which is determined to be a hazardous waste, must be managed in accordance with the Department's Rules and Regulations for Hazardous Waste Management.
- B. For investigatory activities which are likely to require storage of IDW, the site investigation work plan must include the following:
 - 1. selected containment methods
 - 2. the designated secure storage area
 - 3. a schedule for IDW disposal
 - 4. a point of contact responsible for IDW management
- C. All non-hazardous waste IDW storage containers must be labeled with the following information:
 - 1. class of IDW
 - 2. source area
 - 3. date of generation
 - 4. generator name, address and phone number
- D. The period of storage of non-hazardous waste IDW should logically correspond with ongoing site investigative or remedial work and be completely disposed of within 30 days of the end of that phase of site work.