CHAPTER 10

Investigation Derived Waste

10-1. Introduction.

a. This chapter discusses the types of IDW encountered at RCWM projects, characterization procedures, and management procedures. Figures 10-1a and 10-1b illustrate the IDW management process.

b. IDW may consist of anything generated during a site investigation or removal action that cannot be reused or recycled. Some media must be managed as IDW until it has been fully characterized. The characterization may determine that the media is suitable for reuse.

10-2. Soil.

a. Soil. Soil may be generated during a response action in the form of environmental samples, drill cuttings, or excavated soil. Characterization of soil generated during a response action is required whenever there is historical, visual, or other detectable evidence that contamination may be present. If monitoring indicates an airborne hazard, soil will be containerized to prevent exposure to the contamination. If monitoring does not indicate an airborne hazard, soil may be stockpiled in a way to minimize spread of contamination until characterization has been completed.

b. Characterization.

(1) Large volumes of soil are generally characterized by analyzing composite samples. The number of composite samples required to characterize a given volume of soil is generally site-specific due to local laws and regulations. When multiple types of contamination are suspected, characterization will be prioritized based on hazard level, beginning with the greatest hazard level.

(2) Disposal decisions shall be based on agent/ABP and HTRW disposal characterization sampling results. If HTRW characterization is performed, it shall be IAW EM 200-1-3 requirements for chemical analysis. Use of disposal facilities or onsite disposal is contingent upon compliance with the facility-specific requirements for waste acceptance, and state and local regulations. These requirements include, at minimum, complete analytical characterization data and disposal documentation paperwork.

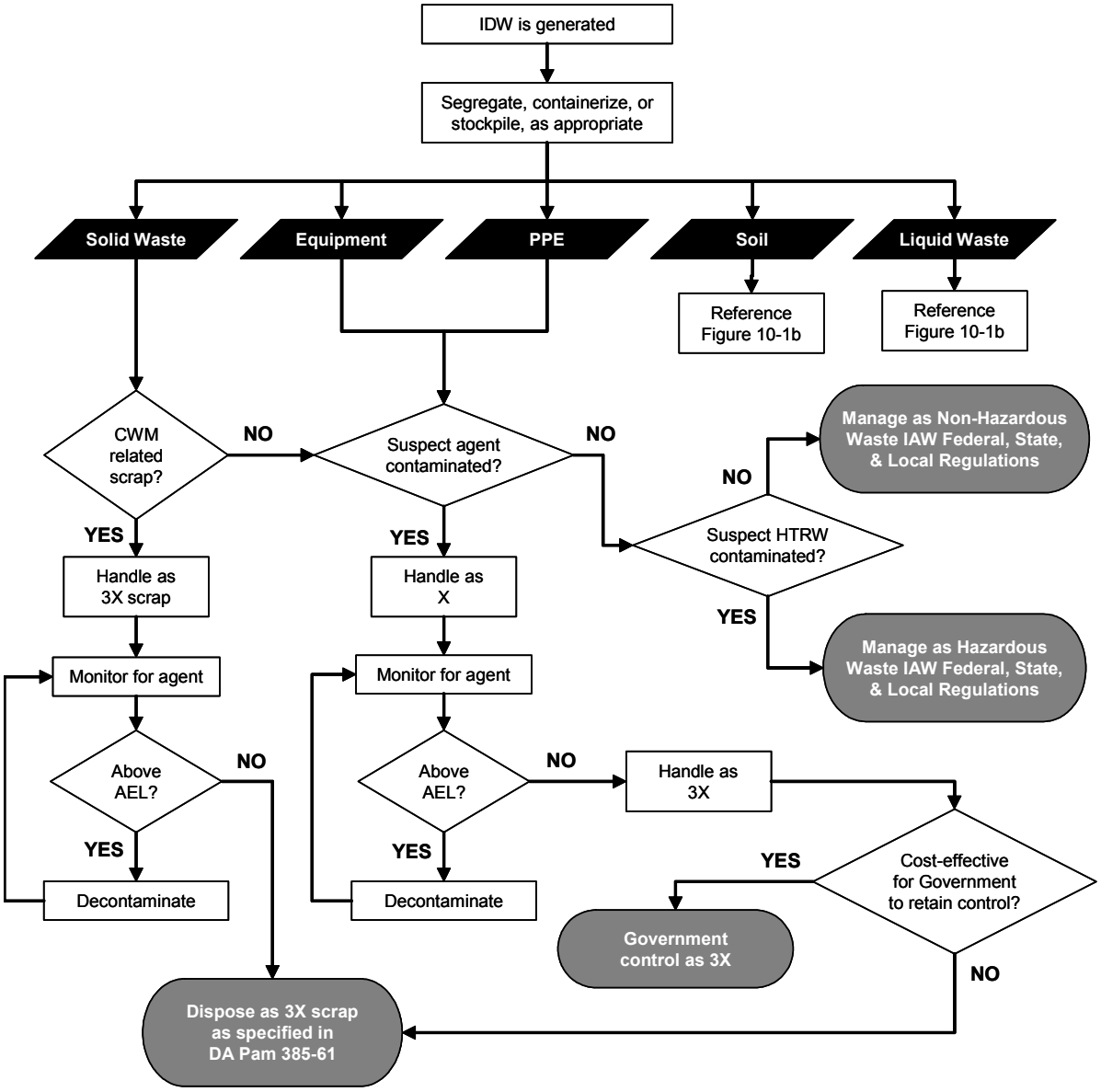

Figure 10-1a. IDW Management Process: Solid Waste, Equipment, and PPE.

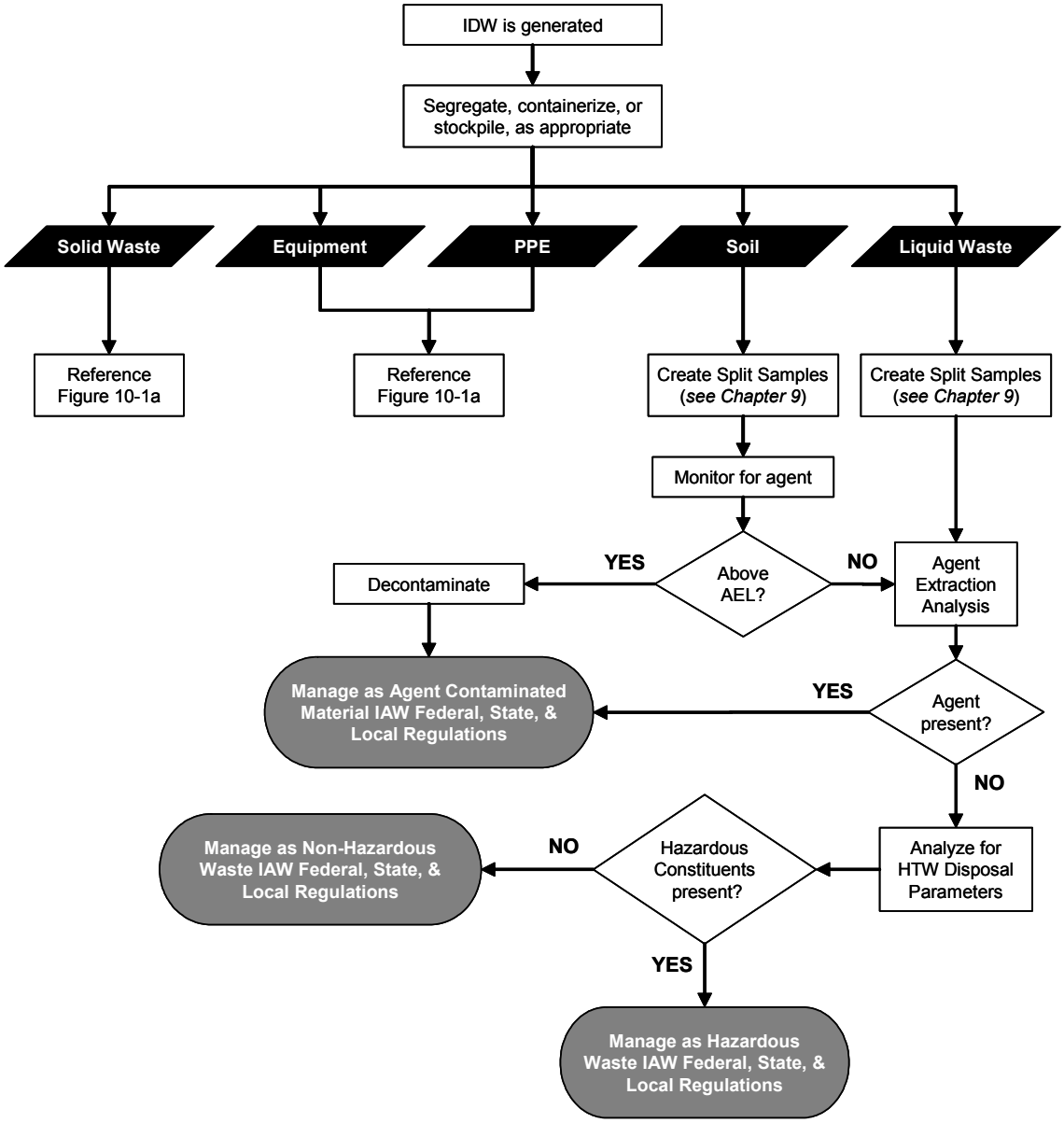

Figure 10-1b. IDW Management Process: Soil and Liquid Waste.

(3) The presence of contamination in soil is based on positive detections of agent/ABP as determined by ECBC or equivalent, and characterized for disposal by an HTW laboratory. Typical HTW disposal analyses for soils include: Toxicity Characteristic Leaching Procedure (TCLP) metals, TCLP Volatile Organic Compounds (VOCs), TCLP Semi-volatile Organic Compounds (SVOCs), ignitability, corrosivity, and reactivity. Depending upon the site history and disposal facility requirements, TCLP pesticides, TCLP herbicides, and poly-chlorinated biphenyls (PCBs) may also be analyzed.

c. Decontamination and Disposal. Soil contaminated with chemical agent will be decontaminated and disposed of IAW DA Pam 385-61. When soil is contaminated with chemical agent and the AEL is exceeded, it will be decontaminated prior to off-site shipment for incineration at an approved facility. Soil characterized as hazardous will be incinerated or otherwise disposed of appropriately at a RCRA-permitted facility.

10-3. Liquid Waste.

a. Liquid waste may be generated during a RCWM response action in the form of environmental samples, drilling fluids, and/or decontamination water. Liquid waste that is suspected to be contaminated will be containerized and managed as IDW until characterization is complete.

b. Characterization.

(1) Liquid waste will be characterized by analyzing representative samples of the generated waste for any suspected contamination. Chemical agents generally break down in water to form less hazardous byproducts. However, if chemical agent is suspected, the environmental sampling procedures described in Chapter 9 of this document will apply.

(2) Disposal decisions shall be based on agent/ABP and HTRW disposal characterization sampling results. If HTRW characterization is performed, it shall be IAW EM 200-1-3 requirements for chemical analysis. Use of disposal facilities or onsite disposal is contingent upon compliance with the facility-specific requirements for waste acceptance, and state and local regulations. These requirements include, at minimum, complete analytical characterization data and disposal documentation paperwork.

(3) The presence of contamination in liquid wastes is based on positive detections of agent/ABP as determined by ECBC or equivalent, and characterized for disposal by an HTW laboratory. Typical HTW disposal analyses for liquid wastes include: TCLP list compounds,

corrosivity, and reactivity. Depending upon the site history and disposal facility requirements, TCLP pesticides, TCLP herbicides, and PCBs may also be analyzed.

c. Disposal. Liquid wastes that are determined to have contamination levels above the site-specific action levels will be classified as hazardous waste and managed IAW Federal, state, and local laws and regulations as appropriate.

10-4. Solid Waste.

a. Solid waste or scrap may be generated during a response action in the form of recovered debris (e.g., metal, glass, wood) resulting from former site activities. All recovered scrap will be managed as IDW; however, until it has been characterized, scrap will be segregated and managed based on possible contamination.

b. Characterization.

(1) Scrap. Scrap will be visually inspected to determine if an explosive hazard is present. If present, the explosive hazard must be mitigated prior to disposal. All scrap must be certified to be free of an explosive hazard prior to disposal.

(2) Scrap suspected to be contaminated with chemical agent must be monitored to determine if contamination is above the AEL. Scrap that will be considered suspect includes materials known to have been used for CWM operations, materials known to have been exposed to chemical agent, and materials that have been in direct contact with other media determined to be contaminated with chemical agent. If agent contamination is above the AEL, surface decontamination IAW DA Pam 385-61 is required. If agent contamination is below the AEL or when an item has been decontaminated to below the AEL, the scrap will be classified as 3X material.

(3) Scrap that has other indications that it may be contaminated with HTRW (e.g., biological waste, visual contamination, air monitoring indicators) will be managed as a hazardous waste.

c. Disposal. Scrap contaminated or suspected to be contaminated with chemical agent or HTRW will be classified as hazardous waste and managed IAW Federal, state, and local laws and regulations as appropriate. All 3X material will be disposed of IAW DA Pam 385-61. Scrap that is determined to be free of contamination may be disposed of in a sanitary or industrial landfill. Whenever possible, scrap that is uncontaminated will be recycled.

10-5. Personal Protective Equipment.

a. PPE is a generated waste when it is consumable, requiring disposal after its use is finished or when it becomes contaminated with chemical agent or HTRW and decontamination of the PPE is not possible or cost effective. When it is cost effective to do so, chemical agent contaminated PPE can be decontaminated to 3X levels and reused. There are exceptions to this reuse; however, property that is determined to be 3X must remain under the control of the Federal Government IAW DA Pam 385-61.

b. Decontamination and Disposal. PPE that is contaminated with chemical agent must be monitored to determine if contamination is above the AEL. If agent contamination is above the AEL, surface decontamination IAW DA Pam 385-61 is required. PPE contaminated or suspected to be contaminated with chemical agent or HTRW will be classified as hazardous waste and managed IAW Federal, state, and local laws and regulations as appropriate. All 3X material will be disposed of or managed IAW DA Pam 385-61. PPE that has not been in contact with agent liquid or vapor may be disposed of in a sanitary or industrial landfill.

10-6. Equipment Disposition.

a. Equipment is classified as either consumable or durable goods. Some examples of consumable goods are PPE and sampling equipment. Heavy equipment is an example of durable goods that is utilized at RCWM projects.

b. Equipment contaminated with agent requires disposition after its intended use is completed either through disposal or reuse. When cost effective to do so, chemical agent-contaminated equipment can be decontaminated to the 3X levels and reused. However, equipment classified as 3X must remain under the control of the Federal Government IAW DA Pam 385-61.

10-7. IDW Plan. The IDW Plan will be included in the Work Plan and will contain the following information:

a. Handling. Describe how IDW (RCWM-contaminated media, hazardous waste, and decontamination wastes) will be handled at this site.

(1) Identify methods to be used to containerize, store, test, transport and handle IDW.

(2) Identify methods used to minimizing the quantity of IDW.

(3) Identify the methods used to manage IDW consistent with the final remedy.

(4) Address how pre-transportation storage, transportation, treatment, and ultimate disposal of the various waste streams will be accomplished.

b. Contracting Office Recommendation. Include a letter report for the CO recommending appropriate disposal actions and treatment.

c. Timely Disposal. Identify how the IDW disposal will be accomplished in a timely manner. To be agreed upon prior to the SOW.

d. Regulated Facility. Document how the disposal of the IDW is conducted by a facility that operates as a Treatment, Storage, and Disposal Facility (TSDF) under RCRA regulations. USAESCH will identify a POC for signature of the hazardous waste manifest.

e. Packaging. Describe the packaging of the materiel IAW state and Federal laws and regulations. Packaging will be addressed in the Work Plan for the purpose of segregation of materiel (if necessary) for transportation and ultimate disposal of the IDW.

f. Personnel.

(1) Identify all personnel and equipment necessary to package, label, manifest, transport, and dispose of the IDW IAW the approved Work Plan.

(2) Provide copies of training certificates with respect to RCRA, HW, and DOT hazardous material regulations.

(3) Provide emergency response contacts.

g. Licenses and Permits. Describe the necessary licenses and permits, and will comply with applicable Federal, state, and local laws, codes, and regulations when executing this work.

h. Transportation. Identify the methods used to ensure the shipment or transportation of IDW is IAW DOT Hazardous Material Regulation 49 CFR 100-199.

i. Manifesting. Describe the preparation of all required hazardous waste manifests, which will include a correct description of all wastes to be shipped in a complete and legible manner and the appropriate details from Paragraph 10-8.

j. Waste Characterization.

(1) Prepare and provide a copy of the Waste Profile Sheet(s), along with a copy of the analytical results used to prepare the profile, to USAESCH and the District or installation.

(2) Include identification of the waste codes and underlying hazardous constituents.

(3) Demonstrate site-specific knowledge of COPCs.

(4) Estimate the type and quantity of IDW to be generated.

k. Weight Slip. Provide a signed weight slip to USAESCH and the District or installation that indicates the actual weight of the IDW that has been shipped to the TSDF.

l. Land Disposal Restriction (LDR) Notification Forms. A copy of the LDR Notification Form and the manifest will go to USAESCH for review prior to USAESCH signing the manifest. This form will identify associated treatment standards required in 40 CFR 268. The contractor will make any revisions to this form. USAESCH will provide a copy of the approved form to the District or installation.

m. Certificate of Disposal. TSDFs must be required under the contract to provide a Certification of Disposal indicating final disposition of all items, signed by the authorized agent of the TSDF, within 10 working days of final disposition. Final payment will not be made until ultimate disposal has been made. This certification will indicate:

(1) The materiel (by item and quantity) that was disposed.

(2) The specific method of treatment.

(3) The date of treatment.

(4) Manifest number of waste.

n. Applicable, Relevant, and Appropriate Requirements. Identify potential ARARs and any exemptions to ARARs. In some jurisdictions, chemical agent and chemical agent contaminated media are considered hazardous waste by regulation. Therefore, local and state hazardous waste regulations will be reviewed to determine which regulations apply.

10-8. Manifesting Requirements.

a. Manifests will be prepared IAW 40 CFR 260-268, applicable state regulations, and 49 CFR 171-178.

b. Completed copies of all manifests, land disposal restriction notification forms, and waste profiles will be forwarded to USAESCH (or the installation) for review at least 10 working days prior to shipment of the IDW.

c. The contractor will make revisions to the manifest as requested.

d. No shipment of the IDW will occur until the Government is satisfied that all entries are correct and the authorized representative of USAESCH has signed the manifest.

10-9. Government Responsibilities. Government responsibilities will include the following:

a. Inspection. Inspect the materiel in the IDW container to be transported for disposal prior to loading, to ensure that only authorized wastes are being offered for treatment/disposal. Upon completion of inspection, notify the contractor of any unauthorized wastes discovered.

b. Designated Generator. Be designated as the Generator at RCWM projects for the purpose of manifesting. For sites adjacent to active installations, where the active installation has assumed responsibility, the installation will make the necessary manifest certifications. For FUDS, the manifest signatory will be an authorized representative of USAESCH. The District's generator number will be used for manifests. A copy of all paperwork will be provided to the PM for information.

c. Manifest Retention. Maintain manifests at the project office for a minimum of three years as required by 40 CFR 262.40. Under Multiple Award Remediation Contracts, maintain records for extended lengths of time as required.