REQUIRED READING SYNOPSIS

Complete this form and submit with procedure revisions when Required Reading is selected as the level of training on the WCH-DC-002 form.

Procedure No.: WMT-1-1.4	Rev No.: 8	Author: M. E. Lewis	Date: 6/20/2012

Procedure Title: Waste Storage and Handling

I. Summary of Changes:

This revision changes prepared by to Millard E. Lewis. Changed all internal procedure references from Waste Management & Transportation to Waste Services. Revised WCH-EE-244. Generated new Form (WCH-EE-329) to capture monthly SAA Inspection Requirements. Generated new form (WCH-EE-330) to capture weekly 90-Day Storage Area Inspection Requirements. Deleted **Note** referencing the 1330-N 90 day pad. Revised sections 5.1. 5.1.1, 5.5.2 and 6.0 incorporating substantive requirements involving the management of CERCLA and PCB waste - including signage and storage time limitations. Inserted new section Titled “CERCLA Waste Storage Piles”. Editorial changes throughout. This procedure revision addresses IF-2012-0062 and IF-2012-0065.

II. Primary Steps Affected:

1. Prepared By is now M. E. Lewis
2. Created new Form WCH-EE-329
3. Created new Form WCH-EE-330
4. Revised WCH-EE-244
5. Deleted note referencing the 1330-N 90 day pad
6. Incorporated additional requirements in Sections 5.0 and 5.1.1 involving the management of CERCLA waste.
7. Editorial changes throughout.

III. Rationale for Changes:

This procedure revision address IF-2012-0062 & IF-2012-0065.

WMT-1, Waste Management and Transportation

Waste Storage and Handling

Prepared By: Millard E. Lewis

1.0 PURPOSE

This procedure provides the requirements for storage and handling of waste generated by Washington Closure Hanford (WCH). This procedure also provides the requirements for performing and documenting inspections of containerized waste and the establishment of waste storage areas. This procedure implements storage and handling requirements in accordance with the following regulations:

- 40 *Code of Federal Regulations* (CFR) 260 through 268, "Hazardous Waste Regulations"
- 40 CFR 761, "Polychlorinated Biphenyls (PCBs), Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions"
- *Washington Administrative Code* (WAC) 173-303, "Dangerous Waste Regulations"
- WAC *173*-350, “Solid Waste Handling Standards”
- 40 CFR *61*, Subpart M, "National Emission Standards for Asbestos"
- U.S. Department of Energy (DOE) O 435.1, Radioactive Waste.
- DOE/RL-2000-25 “Richland Operations Office Implementation Plan for DOE Order 435.1”.

2.0 SCOPE

The scope of this procedure is to identify the requirements for waste storage and handling (including associated inspections) for waste generated by WCH. WCH activities are primarily performed pursuant to the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA). As such, the requirements of other applicable laws and regulations (e.g. Resource Conservation and Recovery Act [RCRA]) are limited to only the substantive requirements for onsite CERCLA actions. The requirements identified in this procedure are a compilation of regulatory requirements and specific requirements outlined by the regulatory agencies in approved documentation.

Approved documentation may include waste management plans (WMPs), waste control plans (WCPs), sampling and analysis plans (SAPs), remedial design reports/remedial action work plans (RDR/RAWP), Records of Decision (ROD), removal action work plans, and action memoranda, etc.

Waste generated by subcontractors is managed as specified in the subcontract documents. Waste associated with sample analysis at a non-WCH laboratory is not included.

3.0 DEFINITIONS

See WMT-1, *Waste Management and Transportation*, WMT-1-APA "Glossary of Terms"

4.0 RESPONSIBILITIES

Waste Services Lead	• Ensure that waste is managed, stored, and inspected in accordance with this procedure • Assist waste generating projects storing and handling waste.
Project Engineer (Waste Generator)	• Ensure that preliminary regulatory documentation (i.e., WCP for investigation-derived waste [IDW]) is approved prior to generating waste • Identify waste with no disposal path and provide to Waste Subject Matter Expert (WSME), Waste Services Lead (WSL), or their designee for review prior to generating waste • Actively reduce standing waste inventories • Support Waste Operations on handling and storage of waste generated • Verify that proposed waste storage and/or handling activities do not impact existing authorization basis or other facility requirements.
Waste Transportation Specialist	• Supports the waste generator ensuring the requirements for storage and handling of waste generated by WCH is in accordance with this procedure.
Environmental Restoration Disposal Facility Sub-Contractor	• Ensure that all requirements of this procedure are performed for all containers and wastes received, stored and or stockpiled as applicable in the contract.
Environmental Project Lead	• Assure proper regulatory documentation is reviewed and approved.
Hanford Site Remedial Project Manager (RPM)	• Approves return of regulatory samples.
Hanford Fire Department	• Performs yearly inspections of RCRA 90 day accumulations areas.

Mission Support Alliance (MSA)	• Prepares Environmental Reports for DOE with WCH input.
Waste Services Manager	Appoint a trained and qualified Waste Services(WS) staff member to support 90 day waste accumulation areas, if applicable.
Waste Pad Administrator	• Manage and maintain 90 day waste accumulations area(s) in accordance with regulatory requirements.
WSME,WSL or designee	• Reviews waste streams that do not have a disposal pathway or are identified as anomalous waste.
Information and Administrative Services	• Provides document and records management services for the WS program
WCH Training Organization	• Maintains training records for WCH personnel.

5.0 REQUIREMENTS

5.1 CERCLA Waste

CERCLA activities shall be conducted in accordance with appropriate decision documents. CERCLA onsite WCH activities performed under CERCLA authority (i.e., ROD, action memorandum, or other CERCLA decision document) are exempt from the administrative requirements of environmental laws and regulations. CERCLA processes are contained in ENV-1, "*Environmental Monitoring and Management*", ENV-1-1.9, "Cleanup Activities."

Projects conducting CERCLA remediation activities shall prepare maps delineating the area of contamination (AOC). Maps of the AOC shall be reviewed by the Environmental Project Lead prior to initiating remediation activities at the site. The maps shall be updated if a change in the AOC occurs.

Remediation waste within the AOC can be consolidated or processed (but not in a separate unit such as a tank) without triggering the Toxic Substance Control Act (TSCA) polychlorinated biphenyl (PCB) requirements or the RCRA Land Disposal Restrictions (LDR). This means that waste may be excavated and allowed to remain in the AOC without having to follow substantive or administrative RCRA or TSCA storage requirements; however, requirements may be specified by the regulatory agencies in regulatory-approved documentation ((e.g., waste management plans (WMP), remedial action work plans (RAWP), or removal action work plans (RAWP)) that must be followed.

Activities that occur completely within CERCLA onsite areas are exempt from administrative requirements and do not require permits. Waste that is moved outside the AOC but remains in the onsite area would, however, become subject to the substantive requirements of the regulations (i.e., waste consolidated outside of the AOC on an onsite storage location must be

properly labeled [substantive requirement] WCH has established a Best Management Practice (BMP) to mark drums per this procedure in the AOC and in the onsite location.

> **NOTE:** CERCLA Storage areas shall be identified and signed per the criteria identified below

Waste that is moved outside of the AOC (e.g., for treatment or storage) but remains within the onsite area will be subject to substantive TSCA and RCRA requirements Waste excavated from an AOC, placed into a separate unit (e.g., tank that is within the AOC), and redeposited into the same AOC will also trigger substantive RCRA requirements.. Land-disposal restricted waste stored outside of the AOC shall only be returned to the AOC, and removed from any container with Lead Regulatory Agency (LRA) approval.

PCB bulk product waste or remediation waste will be managed within the facility of origination or a centralized area within the CERCLA onsite area (following LRA approval). When managing CERCLA waste in the AOC there are no time constraints unless otherwise directed in applicable CERCLA documents. Signage stating “Danger-Unauthorized Personnel Keep Out” must be displayed at all entrances to CERCLA waste storage areas when such areas 1) are located outside of either the associated AOC or building footprint area and 2) contain dangerous waste regulated under WAC 173-303 or PCB waste regulated under 40 CFR 761. This signage must be maintained so that it is legible from a distance of at least 25 feet. Should a qualifying waste storage area be collocated with another, signage would only be necessary for the perimeter of the area containing the collocated waste storage areas.

Environmental Restoration Disposal Facility (ERDF) waste staging area requirements are addressed in the 2002 amendment to the ERDF ROD. Containerized waste storage area requirements are addressed in section 5.1.1 below. Removal action and remedial action (non-ERDF) waste staging pile requirements are addressed in section 5.1.2 below.
Additional requirements for waste generated during CERCLA actions are included in sections 5.1.3, 5.1.4, 5.2, 5.3.1, 5.4, 5.6, 5.7, 5.8, 5.9, and 5.10

5.1.1 CERCLA AOC and Onsite Area for Containerized Waste

> **NOTE:** Checklist items listed in WCH-EE-244 may contain requirements not considered substantive to CERCLA storage areas located within an AOC. However WCH-EE-244 is to be used in the inspection of both AOC and non-AOC CERCLA storage areas.

Containerized CERCLA wastes managed within the AOC from which they originate and that have not been removed from that AOC are subject to storage requirements outlined in the ROD (or other appropriate CERCLA document) only.

As a BMP containerized waste should be identified by marking and labeling per this procedure when managed in the CERCLA AOC. Containerized CERCLA wastes managed outside the originating AOC are subject to all container requirements of WAC 173-303-630. Containerized waste shall be appropriately identified with the major risks of the contents therein, clearly identified on the containers, including DOT labels (i.e. “corrosive, reactive, etc.) dangerous waste codes, asbestos labels and PCB labels.

IDW containerized stored waste shall be appropriately identified with the major risks of the contents therein, clearly identified on the containers, including DOT labels (i.e. “corrosive, reactive, etc.) dangerous waste codes, asbestos labels and PCB labels, and if awaiting analysis, wording which states "waste pending analysis" - with the date of initial sampling.”

Areas that hold containerized CERCLA wastes outside the originating AOC are to abide by the temporary unit requirements of WAC 173-303-64680. Operation of any such area must first be approved by the LRA and abide by the initial operation time specified by the LRA, not to exceed one year. An extension to an initial operation time must also be approved by the LRA and subsequent operation must abide by the updated operation time specified by the LRA, not to exceed one additional year. Two or more extensions per area are prohibited. Following approval, the waste storage area must be incorporated into the Regulatory Commitment Tracking System (RCTS) to ensure that it is not operated longer than approved.

Storage shall follow the requirements for managing dangerous waste, PCB waste, asbestos waste, and radioactive waste, except for CERCLA waste stored in the AOC. LDR regulations contained in 40 CFR 268.50 require that wastes that have been taken out of the AOC and are subject to LDRs be stored only in containers, tanks, or buildings. Of these three storage options, container storage would be the only practical method for storing toxicity characteristic soil and debris.

Signage stating “Danger-Unauthorized Personnel Keep Out” must be displayed at all entrances to CERCLA waste storage areas when such areas 1) are located outside of either the associated AOC or building footprint area and 2) contain dangerous waste regulated under WAC 173-303 or PCB waste regulated under 40 CFR 761. This signage must be maintained so that it is legible from a distance of at least 25 feet. Should a qualifying waste storage area be collocated with another, signage would only be necessary for the perimeter of the area containing the collocated waste storage areas.

Spills from leaking equipment (e.g., hydraulic fluid, diesel, oil) are appropriate for ERDF disposal when they occur from equipment supporting the CERCLA activity, the waste meets the ERDF waste acceptance criteria, and the spills occurrred within the CERCLA onsite area

All containers (except for containers used to collect fluorescent light tubes) will be closed and secured when not being filled/emptied, and will be stored to prevent the accumulation of water. Containers in poor condition will have their contents transferred to a container in good condition. Portable fire extinguishers and spill-control equipment will be available.

CERCLA waste <u>not</u> stored in a CERCLA onsite location or AOC specified in the ROD (or other appropriate CERCLA document) shall be stored or accumulated in a satellite accumulation area (SAA), a 90 day storage area, or in a permitted storage area only with prior LRA approval, and in accordance with applicable requirements for dangerous waste, PCB waste, and asbestos waste.

Containers shall be identified by package identification number (PIN).

5.1.2 CERCLA Waste Staging Piles

As an alternative to storage within the AOC or building footprint area, waste that is not immediately transported to ERDF or another regulator-approved facility may be stored in staging piles. Staging piles are used only during remedial or removal operations for temporary storage at a facility and must be located within the contiguous property where the wastes to be managed in the staging piles is originated. Each staging pile must be approved prior to use by the LRA and each staging pile location must be documented in project drawings, each as required. A staging pile location must undergo a radiological survey prior to receiving waste if the staging pile is to be used either as part of a removal action in the 100-N Area or a remedial action. A staging pile must be surrounded with a 6 inch berm prior to receiving waste if the staging pile is to be used as part of a remedial action. The berms are to remain fully in place at all times, regardless of activity or the presence of other run-on/run-off controls. Documentation of all pre-use surveys of staging pile areas is to be provided to the responsible Environmental Project Leads (EPLs).

Staging piles must be designed so as to prevent or minimize releases of hazardous wastes and hazardous constituents into the environment and minimize or adequately control cross-media transfer, as necessary to protect human health and the environment. Incompatible wastes may not be placed in the same staging pile unless the requirements of 40 CFR 264.17(b) have been met. The incompatible materials must be separated or protected from each other with a dike, berm, wall, or other device. Waste may not be piled on the same base where incompatible wastes or materials were previously piled unless the base has been decontaminated sufficiently to comply with 40 CFR 264.17(b). Ignitable or reactive waste must not be placed in a staging pile unless it has been treated or mixed before being placed in the pile so that the waste no longer meets the 40 CFR 261 Subpart C definitions of ignitable or reactive waste, or the waste is managed to protect it from exposure to any material or condition that may cause it to ignite or react. Staging piles cannot be used for flowing (i.e., non-solid) waste storage.

No staging pile may operate for more than 2 years (measured from the first time remediation waste is placed into the staging pile), except when the EPA grants a one-time six month operating term extension. A record of the date when remediation waste was first placed into the staging pile must be maintained until final closeout of the site is achieved. Documentation of the initial use of a staging pile is to be provided to the responsible EPL. Staging pile information must be incorporated into the RCTS to ensure that the staging pile is not operated longer than approved. Within 180 days after expiration of the operating term of a staging pile located in a previously uncontaminated area, the staging pile must be closed in accordance with substantive provisions of 40 CFR 264.558(a) and 40 CFR 264.111, or 40 CFR 265.258(a) and 40 CFR 265.111. This includes removing all remediation waste, contaminated containment system components, and structures and equipment contaminated with waste and leachate.

Additional staging pile requirements may be included in CERCLA decision documents (e.g., RDR/RAWPs). Prior to use of a staging pile as part of a remedial or removal operation, the pertinent CERCLA decision document(s) should be reviewed in order to identify any additional staging pile requirements.

5.1.3 CERCLA Noncontiguous Onsite Areas

Noncontiguous CERCLA locations can also be deemed as onsite by LRA for the purposes of the remedial action. For example, ERDF or the Effluent Treatment Facility (ETF) can be

determined to be onsite for CERCLA remedial action purposes. These determinations are usually made by LRA in a ROD. After determined to be onsite, the remedial action waste managed at these facilities is subject only to the substantive requirements of the regulations.

5.1.4 CERCLA Samples

CERCLA samples sent to an offsite laboratory (including treatability test samples sent offsite) may not be transferred back to the Hanford Site unless approval is received from the Remedial Project Manager (RPM). The RPM ensures proper management of the returned samples. The RPM is the EPA field office manager. This requirement is generally met through approval of a SAP.

BASIS: EPA (1996), and BMP

5.2 Investigation-Derived Waste

Management of both radiologically and chemically contaminated IDW will be performed in accordance with the strategy for managing IDW (see CCN 067483 "Environmental Restoration Program Strategy for Management of Investigation-Derived Waste").

> **NOTE:** If, following waste characterization, the IDW must be stored for longer than 6 months, the U.S. Department of Energy, Richland Operations Office (RL) will request an extension from the lead regulatory agency on the current storage, treatment, and disposal options and the schedule for disposition of the waste.

5.3 Waste Pending Analysis / Unknown Waste

5.3.1 Waste Pending Analysis

The Washington State Department of Ecology has an allowance that eliminates the 90 day clock issue for containerized waste that requires sampling analysis to determine the proper waste designation.

This allowance is not applicable to waste managed in accordance with CERCLA. Waste managed in accordance with CERCLA should be managed per section 5.1 of this document.

For waste not managed in accordance with CERCLA the following requirements apply.

1. Labels with the words "WASTE PENDING ANALYSIS" shall be applied to the top and sides of the container (upper one-third).

2. The date of discovery that is marked on the WCH Waste Inventory Sheet (WIS) (WCH-EE-238) shall be marked on the “Waste Pending analysis” label.

3. The container shall be marked with the initial sampling date.

4. For containers of suspect dangerous waste, mark the container as "SUSPECT DANGEROUS" or "SUSPECT HAZARDOUS" on the top and sides of the container.

5. The name, address, and telephone number of the sampling facility will be documented in the container file.

6. A hazardous waste label shall be applied when the generator receives information, or has knowledge that the waste would be regulated by WAC 173-303.

7. For dangerous waste pending analysis, the 90-day clock begins when the waste is identified as dangerous. (e.g., when the analytical results are received).

5.3.2 Unknown Waste

This section is not applicable to waste managed under CERCLA. Waste managed in accordance with CERCLA should be managed per section 5.1 of this document.

In addition to the requirements in Section 5.3.1, Unknown Waste has the following additional requirements.

- When an unknown is discovered, either as a contained waste or as a spilled material, all associated media and equipment shall be isolated to the extent practicable until confirmation of the waste type is received (e.g., the equipment being used during an excavation may also require decontamination).

- Immediately report all spills/release to the environment to the immediate supervisor or Subcontractor Technical. (ENV-1-1.17, “Spill Prevention, Response, and Reporting Protocol ”) A flowchart depicting the response to a known or unknown spill is shown in Attachment 4
- , Basic Spill Response Flowchart.

- Information that may help discern the origin or contents of the waste, such as appearance, location, or proximity to known processes or activities, should be included with the process to evaluate the waste to ensure appropriate management.

- Waste shall be moved to a 90-day accumulation area and managed in accordance with the waste pending analysis requirements identified in Section 5.3.1.

- Storing unknown waste in a SAA is not acceptable.

- The project responsible for managing an unknown waste shall act with due diligence to initiate sampling and testing to determine the dangerous waste status. "Due diligence" means that the process to acquire the sample(s) has begun within 24 hours of discovery. Follow-up is required to ensure that results are received in a timely manner.

- Unknown waste shall not be co-mingled with other waste streams.

BASIS: Washington State Department of Ecology (Ecology) Technical Information Memorandum 82-5 (Ecology 2000b) and Ecology Publication 95-423 (Ecology 1995)

5.4 Nondangerous/No Radiation Added Solid Waste

Nondangerous/no radiation added waste will be radiologically released in accordance with WMT-1-1.8, "Release of Waste Not Controlled as Radioactive.” Equipment and materials will

be disposed in accordance with BSC-2, *Property Management Manual*, BSC-2-7.1, "Disposition of Equipment and Material," as applicable. See WMT-1-1.1, "Waste Minimization and Recycling," regarding the recycling of solid waste. Radiological release shall be conducted in accordance with RC-200, *Radiological Control Field Procedures.*

5.5 Dangerous Waste

Dangerous waste shall be stored or accumulated only in a SAA, a 90-day accumulation area, or in a permitted storage area except for CERCLA dangerous waste which shall be managed in accordance with section 5.1 “CERLCA Waste” of this procedure.

5.5.1 Satellite Accumulation Areas (SAA)

The following requirements are for SAAs:

5.5.1.1 Notification of Establishment. Project Engineers/Waste Generators shall ensure all SAAs are identified on the WCH master list, which is maintained by the WS organization.

> **NOTE:** To add or delete a SAA, contact the WS SME Via e-mail with a request to add or delete the area. The actual area may not be established until a return e-mail is received stating that the change to the list has been made.

The list shall identify the location of the accumulation area, the waste types, date the list was compiled, and the responsible waste generator.

A generator is not limited to the number of SAAs allowed onsite.

The regulations do not specify a minimum distance between SAAs. Two or more separate areas may be adjacent to each other, provided that each area independently meets the definition and requirements for satellite accumulation.

5.5.1.2 Storage Limits. 55 gal of dangerous waste, or 1 qt of acutely hazardous waste per waste stream, may be accumulated in containers at a SAA near the point of generation.

1. Each SAA is limited to an individual waste stream.

> **NOTE:** See glossary for Waste Management and Transportation (WMT-1) under SAA for definition of “Per or each waste steam”

2. There is no limit to the number of containers allowed in a SAA for waste collection. However, each area must not exceed the aggregate volume threshold limit of 55 gal of hazardous waste, or 1 qt of acutely hazardous waste.

3. Only containers can be managed in SAAs.

4. Satellite accumulation activities occurring in tanks, waste piles, lagoons, or any other hazardous/dangerous waste management unit or device are prohibited.

5. Each SAA must be at or near the point of generation.

NOTE: See glossary for Waste Management and (WMT-1) under SAA for definition of "At or near"

6. Only waste that is generated on a relatively continuous basis may be stored in SAAs.

7. Waste that is generated on an infrequent or one-time basis (e.g., spills) cannot be held for extended periods of time in SAAs. The Washington State Department of Ecology does not intend to allow cleanup material to accumulate or to be stored indefinitely in a SAA container.

5.5.1.3 Area Control. The area must be under the control of the operator of the process that is generating waste, or the area must be secured at all times to prevent improper waste from being added to a satellite container.

NOTE: See glossary for Waste Management and Transportation (WMT-1) under SAA for definition of "control of the operator" and "Secured at all times.

1. Regulations do not prohibit a generator from locating a SAA within a 90-day accumulation area. The area, located as such, must independently meet the definition of a SAA and shall be in compliance with the SAA regulations.

2. SAAs cannot be located offsite from where the waste is initially generated.

5.5.1.4 Start Dates and Time Limits. After the volume threshold limit has been reached or accumulation has stopped in a SAA, the container must be marked immediately with the accumulation start date. For example, 1 gal of dangerous waste is added to a container previously holding 54 gallons. The accumulation limits have been reached. The container is securely closed following addition of the waste, and the accumulation date is marked before leaving the container unattended.

1. Within 3 days (i.e., 72 hours) from the time that the volume threshold has been reached, the container must be moved to a designated treatment, storage, or disposal facility or to an onsite 90-day accumulation area.

5.5.1.5 Response Plans. A contingency plan is not required for a SAA. However, adequate spill response and emergency response considerations shall be considered for SAA management. See ENV-1-1.7, "Environmental Reporting", SEM-2-1.0 "Emergency Management Program", and Attachment 4.

5.5.1.6 Required Training. Hanford General Employee Training, Facility Emergency Information Training, and appropriate required reading are required for personnel managing dangerous waste in SAAs in accordance with BSC-1, *Business Services and Communications*, BSC-1-2.4, "Training Requirements." Training records are maintained by Training department.

5.5.1.7 Containers. Container markings, signs, and labels shall be in English, legible, weather-resistant, in a color contrasting to the background, located in the upper one-third of the container.

Containers shall be clearly marked or labeled with the words "DANGEROUS WASTE" or "HAZARDOUS WASTE" (see Attachment 2). Other areas on the label (e.g., applicable waste codes on the hazardous waste label) are not required to be completed. If the container is too small to apply these labels, an alternate identification system may be used that will fulfill identification concerns.

Each container shall be marked with a label or sign to identify the major risks associated with the contents for employees, emergency response personnel, and the public.

- When a waste meets the definition of a U.S. Department of Transportation (DOT) hazard class, the DOT label is considered the appropriate method for displaying the major risk. Because Class 9 does not show any risk and Class 7 does not cause a waste to be dangerous, these two hazard classes will not be used to display a major risk.

- For materials where a DOT hazard class label is inappropriate, the waste will be marked with "TOXIC" if appropriate.

1. Containers shall be stored in a manner to ensure that affixed markings, signs, or labels are not obscured, easily removed, or otherwise unreadable.

2. Each container holding waste shall be marked with a unique identifier per WMT-1-1.7, “Waste Tracking, Traceability, and Closeout.”

3. A WCH Waste Inventory Sheet (WCH-EE-238) shall be provided for each waste container per WMT-1-1.7.

4. Overpack containers shall display the same markings, signs, or labels as affixed to the inner waste container.

5. Containers shall be stored in a controlled area as follows:

    - Spill control and decontamination equipment appropriate for the waste in the SAA and portable fire extinguishers (when storing combustible material) shall be available.

    - The controlled area shall be sloped or otherwise designed and operated to drain and remove liquid resulting from precipitation, or the containers should be stored on pallets or otherwise elevated to protect from contact with accumulated liquids.

    - Containers shall be securely closed except when adding or removing waste.

    NOTE: "Securely closed" means the lid or bungs are in place and tightly closed so the container will not leak or lose any of its contents if the container is tipped over.

6. Containers shall not be opened, handled, or stored in a manner that may rupture the container or cause the container to leak.

7. Containers shall be in good condition with no severe rusting, leaks, or apparent structural defects.

NOTE: Rust-induced flaking or pitting of the container's surface is considered severe rusting.

8. Containers that are leaking or in poor condition shall have the contents transferred to a container that is in good condition. Overpacks should only be used as a short-term solution for questionable containers of liquids or to segregate incompatible waste. Overpacks containing waste containers should be closed, except when inspecting the waste container or sampling, adding, or removing waste. Overpacks are not required to be staged at SAAs.

9. Containers or liners must be compatible with the accumulated waste.

NOTE: Compatible containers may be identified in accordance with WMT-1-2.2, “Classifying, Packaging and Communication of Hazardous Materials for Transportation.”

10. Incompatible wastes, or incompatible wastes and materials, shall not be placed in the same container unless the requirements of WAC 173-303-395 (1) through (6) are met.

11. Dangerous waste shall not be placed in an unwashed container that previously held an incompatible waste or material.

12. Containers holding reactive waste exhibiting a characteristic specified in WAC 173-303-090(7) (a) (vi), (vii), or (viii) must be stored in a manner equivalent to the Uniform Fire Code (UFC), "American Table of Distances for Storage of Explosives."

13. The UFC for ignitable or reactive waste include, but are not limited to, portable fire extinguisher available, storage area is within 45.75 m (150 ft) of a 6.1-m (20-ft)-wide access road, storage area is free of weeds and debris, and "NO SMOKING OR OPEN FLAME" signs are posted.

14. Ignitable or reactive waste shall be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (i.e., static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat.

5.5.2 90-day Accumulation Areas (90-day pads)

Except for the discovery of an unknown waste, WCH currently does not utilize 90-day storage areas. WCH establishes a minimal number of SAA's. Ideally, RCRA waste generated at SAA’s is shipped directly to permitted storage. In the event a 90-day storage area is necessary (i.e. an unknown waste is discovered), applicable requirements of this Section shall be followed.

5.5.2.1 Notification of Establishment. Project Engineers/Waste Generators shall ensure that active 90-day waste accumulation areas within their project are identified on a WCH master list, which is maintained by the WS organization.

NOTE: To add or delete 90 day accumulation areas, contact the Waste Services SME via e-mail with a request to add or delete the area. The actual area may not be established until a return e-mail is received stating that the change to the list has been made.

The list shall identify the location of the area, waste types, date when the list was compiled, and the responsible waste generator.

5.5.2.2 Time Limits. A waste generator may accumulate dangerous waste at a 90-day accumulation area for 90 days or less. A copy of the 90-day area inventory will be maintained at the facility and can be obtained from the Waste Pad Administrator.

1. When managing a hazardous/dangerous waste, the 90-day accumulation time limit begins when the waste is first placed in a container, when the waste first becomes subject to the dangerous waste regulations as a hazardous/dangerous waste, or when the accumulation limit is reached in satellite accumulation and placed at the 90-day accumulation area.

2. For an unknown waste, the 90-day accumulation time limit begins as soon as the generator receives the test results indicating that the material will designate as a dangerous waste. However, if the generator knows the waste will designate (e.g., corrosive, but other constituents are unknown), the clock starts when the waste is identified as dangerous prior to receiving sample results. Unknown waste shall be managed as waste pending analysis/unknown in accordance with Section 5.3 of this procedure.

   - The following information must be kept in the logbook for each unknown waste: the date of discovery; the date samples were shipped to a testing facility; and the name, address, and phone number of the testing facility. The logbook is maintained by the Waste Pad Administrator.

3. A one-time, 30-day extension to the 90-day accumulation period may be granted by Ecology. There must be a temporary, unforeseen, and uncontrollable circumstance that will be resolved within the 30-day extension period, and the request must be made to Ecology before the 90-day accumulation period expires.

5.5.2.3 Minimum Separation Spacing. A minimum of 80 cm (30-in.) separation is required between the rows of containers holding dangerous waste. Rows must be no more than two drums in width. If the drums are not configured in rows, the container separation must allow for inspection and the unobstructed movement of personnel and emergency equipment.

5.5.2.4 Weekly Inspections and Schedule. A written inspection schedule must be kept at the facility. The schedule must indicate the frequency of inspection for specific items. The 90-day accumulation area must be inspected at least weekly (i.e., no less than once every 7 days) for leaking or deteriorating containers and containment systems using the Waste Container Storage Inspection Checklist (form WCH-EE-244), even during periods of time when waste is not being accumulated. An inspection log must be kept for 5 years and must include the date and time of the inspection, the printed name and the handwritten signature of the inspector, a notation of the observations, and the date and nature of any repairs or remedial actions performed. Inspection logs must be submitted by the Waste Pad Administrator to I&AS within 7 days of completion.

Problems noted during inspections shall be recorded on the inspection record. Notification of deficiencies shall be brought immediately to the attention of the Waste Generator, Waste Services Manager and their respective Directors. Deficiencies shall be tracked in the site corrective action request system until resolved.

5.5.2.5 Annual Inspections. All 90-day accumulation areas require a joint inspection by facility personnel and the Hanford Fire Department (HFD) each year. Generators shall supply related information to the HFD each year to prepare for the inspection. Inspections will be scheduled by the HFD in conjunction with the Pad Administrator and documented using the Waste Container Storage Inspection Checklist (form WCH-EE-244).

5.5.2.6 Incompatible Wastes. Incompatible waste streams in an accumulation area must be separated by a dike, berm, wall, or other device. Incompatible waste and/or products must not be stored within the same containment system.

Incompatible materials/wastes shall be properly segregated and stored. Attachment 1 of this procedure provides a segregation table (by DOT hazard class) for hazardous materials.

A container holding a dangerous waste that is incompatible with any waste or other materials stored within 7.6 m (25 ft) in other containers, piles, open tanks, or surface impoundments shall be separated from the other materials or protected from the other materials by means of a dike, berm, wall, or other device. This requirement also applies to incompatible materials separated by greater than 7.6 m (25 ft) if the potential exists for the materials to be commingled.

5.5.2.7 Containment. The base of the containment system shall be sloped or the containment system otherwise designed and operated to collect and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.

5.5.2.8 Marking. Each stored container must have the accumulation start date marked on it that is clearly visible for inspection, as well as other required markings and labeling for containers.

5.5.2.9 Training Plan. A written training plan must be maintained for the 90-day accumulation area. A program of classroom instruction or on-the-job training must be provided for unit personnel. Unit-specific contingency plan implementation training is also required. Facility personnel must take part in an annual review of the required training. Hanford General Employment Training, Facility Emergency Information Training, and appropriate procedure reading are required for personnel managing dangerous waste in accordance with BSC-1, *Business Services and Communications*.

Personnel directly associated with work at the waste pad shall be trained in accordance with ENV-1, *Environmental Monitoring and Management*, ENV-1-1.18, “Dangerous Waste Training Plan”. Training records are maintained by Training department.

5.5.2.10 Facilities Design. Facilities must be designed and constructed in accordance with applicable OSHA, Fire Safety Codes and Department of Ecology regulations.

5.5.2.11 Contingency Plan. The area where 90-day accumulation areas are located must have a written contingency plan incorporated into the facility authorization basis or other requirements document. The organization responsible for the area where an accumulation area is located will develop and maintain the contingency plan.

Personnel working in the 90 day accumulation area shall read and understand the contingency plan prior to work initiation. Personnel that are not aware of the contingency plan shall be

escorted by trained and qualified personnel during operational activities at the 90 day accumulation area.

5.5.2.12 Protective Coverings. Extremely hazardous waste must be protected from weather elements by a building or other protective covering that allows inspection. Other protective coverings include clear plastic draped over the container or plastic container lids that protect the tops of the containers if the accumulation area is not covered by a roof.

5.5.2.13 Waste Analysis Plan. Generators treating waste in less than 90-day treatment units (e.g., treatment-by-generator units) must develop a waste analysis plan before treatment in the unit and must keep the plan on file at the unit. The waste analysis plan must be made available upon request.

5.5.2.14 Emergency Response. Response to emergency events or abnormal conditions will be in accordance with existing facility requirements and Attachment 4.

If an event occurs, the organization responsible for the 90-day accumulation area will perform occurrence notification and reporting in accordance with , SEM-3, *Incident Response and Investigation,* SEM-3-1.2, "Occurrence Categorization and Reporting," and ENV-1-1.7, "Environmental Reporting".

5.5.2.15 Containers. Container requirements at the 90-day accumulation area must meet the container requirements listed in Section 5.5.1.7 as well as the requirements stated in Section 5.5.2 of this procedure.

Additional applicable requirements are as follows:

1. Containers shall be stored in a controlled area that is posted at each entrance and along the boundary as necessary to be seen from any approach to the area with signs stating, "DANGER-UNAUTHORIZED Personnel Keep Out." This sign should be readable from a distance of 7.6 m (25 ft).

2. Salvage containers shall be available to overpack containers.

3. Ignitable and reactive waste shall only be stored in an area that is designated, operated, and maintained in a manner equivalent with the Uniform Fire Code (UFC). Where specific standards or requirements are not specified in the UFC, or in existing state or local fire codes, applicable sections of National Fire Protection Association's (NFPA's) *Flammable and Combustible Liquids Codes* (NFPA 2000), must be used. Operations must also comply with the requirements of WAC 173-303-395 (1) (d). (See section 5.5.2.5 of this procedure).

4. Liquid dangerous wastes, wastes exhibiting the characteristic of ignitability or reactivity, and wastes designated as F020, F021, F022, F023, F026, or F027 shall be stored in a storage area with a containment system capable of collecting and holding spills and leaks, as follows:

    - The containment system shall have sufficient capacity to contain 10% of the volume of all containers or the volume of the largest container (whichever is greater).

- Uncovered storage areas shall have a containment system capable of holding the additional volume that would result from the precipitation of a maximum 25-year storm of 24-hour duration.

- The containment system shall have a base underlying the containers that is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated rainfall until the collected material is detected and removed.

- The containment system shall be designed for positive drainage control to prevent release of contaminated liquids and so uncontaminated precipitation can be drained promptly for convenience of operation.

- Containment systems for incompatible waste shall be separate.

5. The following wastes shall <u>not</u> be stored on the 90-day accumulation area:

- Waste capable of detonation or explosive reaction if it is subjected to a strong initiating source.

- Waste that is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

- Waste that is a forbidden explosive as defined in 49 CFR 173.54, or a Class 1 explosive, Division 1.1, Division 1.2, Division 1.3, and Division 1.5, as defined in 49 CFR 173.50.

5.5.3 Land Disposal Restriction Storage Prohibition

The EPA prohibits restricted waste from being stored unless storage is solely for the purpose of accumulating such quantities of hazardous/dangerous waste, as necessary, to facilitate proper recovery, treatment, or disposal. The burden of proving the storage was solely for the purpose of accumulating such quantities of hazardous waste (as necessary to facilitate proper recovery, treatment, or disposal) will be on the waste generator if waste is stored for a period exceeding one year.

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-26-00 requires that the DOE provide an annual land disposal restriction report describing generation, treatment, storage, and disposal of mixed waste at Hanford (Ecology et al. 1998). The Mission Support Alliance Contractor (MSA) prepares the report for DOE. The WCH report input is prepared by Environmental Compliance/Services in accordance with ENV-1, *Environmental Monitoring and Management,* ENV-1-1.7 Environmental Reporting" with Project/waste generator input.

5.6 Radioactive Waste

All radioactive material with a concentration greater than 10% of the 10 CFR 835, Appendix E limit shall be stored in accordance with RC-1, *Radiation Protection Procedures* and DOE O 435.1.

1. Containerized waste in a radioactive material area (RMA) is controlled in accordance with *Radiological Control Field Procedures*, RC-200-6.4, "Designating and Controlling Radioactive Material Areas (RMAs)." Newly generated radioactive waste (i.e., waste

generated after January 10, 2002) shall be managed in accordance with the timeframes identified in DOE O 435.1, *Radioactive Waste Management*. Anticipated storage must be evaluated based on risk to determine the level of precaution and controls that must be established.

- Staging: Staging of low-level waste shall be for the purpose of accumulating such quantities of waste as necessary to facilitate transportation, treatment, and disposal. Staging for periods longer than 90 days shall meet the requirements for storage.

- Storage: Low-level waste that has an identified path to disposal shall not be stored for periods longer than one year prior to disposal, except for storage for decay, or as otherwise authorized by the DOE RL Field Element Manager.

  - Low-level waste in storage shall not be readily capable of detonation, explosive decomposition, reaction at anticipated pressures and temperatures, or explosive reaction with water. Prior to storage, pyrophoric materials shall be treated, prepared, and packaged to be nonflammable.

  - Low-level waste shall be stored in a location and manner that protects the integrity of waste for the expected time of storage and that minimizes worker exposure.

If special nuclear materials, spent fuel, high-level waste, or transuranic waste are encountered during the WCH's remedial or decontamination and decommissioning activities, the waste will be managed in accordance with DOE O 435.1 and processed for storage/disposal by the MSA pending future disposal.

5.7 Polychlorinated Biphenyls (PCB)

PCB waste (including PCB capacitors) designated for disposal shall be stored in a facility meeting the criteria of 40 CFR 761.65(b) (1) or the options identified in 40 CFR 761.65(b) (2). PCB waste may be stored temporarily for up to 30 days outside of a PCB storage facility (except for CERCLA actions), provided that a notation is attached to the item or the container, indicating the date removed from service. The 90-day accumulation areas and SAAs are not RCRA-permitted units, and PCB waste may only be stored in these areas for up to 30 days, unless compliant with 40 CFR 761.65(b) (1). For storage longer than 30 days, the requirements of 40 CFR 761.65(b)(1) or 40 CFR 761.65(b)(2) must be met.

Out-of-service dates shall be indicated on all PCB waste removed from service or on the accumulation container. For items placed in a container, the out-of-service date is the date of the oldest item in the container. The out-of-service date shall be placed on the container when the first waste item is placed in the container.

Nonradioactive PCB waste must be disposed within one year from the time the PCB waste was removed from service. PCB/radioactive waste with no path for disposal may be stored greater than one year, provided that written documentation to support disposal efforts are kept, and the waste is managed in accordance with all other applicable requirements for radioactive material management.

PCB-contaminated electrical equipment (i.e., less than 500 parts per million [ppm] PCB) drained of all free-flowing dielectric fluid is not subject to any of the requirements for the storage for disposal of PCBs.

1. Inspections of PCB items in storage pending disposal shall be conducted as required in 40 CFR 761.65 (weekly for items outside of a PCB storage facility, and monthly for items in a facility) using the Waste Container Storage Inspection Checklist (form WCH-EE-244). Any leaking PCB item and its contents shall be transferred immediately to properly marked non-leaking containers.

2. A PCB annual document log is prepared for DOE by the MSA, which includes the information described in 40 CFR 761.180. Records for all PCB and PCB-contaminated systems must be maintained by the WCH as part of the container file. The WCH provides an annual verification of the data entered in the PCB log.

3. Requirements in 40 CFR 761.215 shall be followed and exception reports shall be submitted if necessary. Operational activities shall be managed to avoid the submittal of exception reports from offsite storage or disposal facilities.

4. Containerized PCB waste shall be stored in facilities that meet the following criteria:

   - PCB containers and all entrances shall have a PCB label (see Attachment 3)

   - An adequate roof and walls prevent rain water from reaching the containers

   - An adequate floor with continuous curbing, with a minimum 15-cm (6-in.)-high curb. The floor and curbing shall provide a containment volume equal to at least two times the internal volume of the largest PCB article or PCB container, or 25% of the total internal volume of all PCB articles or PCB containers stored there (whichever is greater). The curbing does not apply to PCB/radioactive wastes; however, the floor and curbing shall still provide a containment volume as identified above

   - No drain valves, floor drains, expansion joints, sewer lines, or other openings are present that would permit liquids to flow from the curbed area

   - Floors and curbing shall be constructed of Portland cement, concrete, or a continuous, smooth, nonporous surface that prevents penetration of PCBs

   - PCB storage facilities are not located at a site that is below the elevation of the 100-year flood.

5. The following PCB items may be stored temporarily in an area that does not comply with the requirements identified in item 4 above for up to 30 days from the date of their removal from service, provided that a notation is attached to the PCB item or a PCB container containing the item to indicate the date that the item was removed from service:

   - Non-leaking PCB articles and PCB equipment

   - Leaking PCB articles and PCB equipment if the PCB items are placed in a non-leaking PCB container that contains sufficient sorbent materials to absorb any liquid PCBs remaining in the PCB items

   - PCB containers containing non-liquid PCBs such as contaminated soil, rags, and debris

- PCB containers containing liquid PCBs at concentrations of greater than or equal to 50 ppm, provided that a spill prevention, control and countermeasure plan has been prepared for the temporary storage area and the liquid PCB waste is in packaging authorized by the DOT's hazardous materials regulations (49 CFR 171 through 180).

6. Each of the following shall be marked with the large PCB mark ML, similar to that shown in Attachment 3 of this procedure:

   a. Each entrance to an area storing PCB items for disposal

   b. PCB containers and PCB article containers

5.8 Asbestos

Asbestos waste shall be stored in impermeable bags or containers. Containers shall be marked "DANGER, CONTAINS ASBESTOS FIBERS, AVOID CREATING DUST, CANCER AND LUNG DISEASE HAZARD," and "AVOID BREATHING AIRBORNE ASBESTOS FIBERS." If the asbestos is bagged and in a container the words “BAGGED ASBESTOS” shall as a minimum be added to the shipping paperwork or marked on the shipping paperwork.

When it is determined to be impractical to dispose asbestos waste immediately after collection, the waste will be accumulated in locked containment bins or other securable locations. Asbestos-containing materials shall be managed in accordance with 40 CFR 61.140 through 157.

5.9 Recycle and Universal Waste

Recycle and Universal Waste accumulation containers shall be stored in a controlled area. The area must be secured at all times to prevent improper waste from being added to the accumulation container. Containers shall be securely closed except when adding or removing waste. A WCH Waste Inventory Sheet (WCH-EE-238) shall be provided for each accumulation container.

See WMT-1-1.1, "Waste Minimization and Recycling," for container marking requirements.

5.10 Storage Inspections

Frequency of inspections is as follows and shall be documented on the Waste Container Storage Inspection Checklist (form WCH-EE-244):

1. IDW storage areas inspections are to be conducted weekly (i.e., once each calendar week) when the area contains dangerous liquid waste, suspect dangerous liquid waste, mixed liquid waste, suspect mixed liquid waste, or PCBs waste (stored outside). Inspections for solids, overpacked liquid containers, and PCB waste (stored inside) are conducted monthly. Notification of non-compliant conditions shall be made to waste generator, Waste Services Manager and the respective Directors for each organization upon discovery. Non-compliant condition(s) shall be reported on the Corrective Action Reporting system.

NOTE: Inspections of some IDW containers may be limited due to radiation exposure. In those cases, the containers should be observed from a safe distance for accountability purposes only.

2. CERCLA (remediation) waste storage areas require inspections of dangerous and PCB waste (stored outside) to be conducted weekly (i.e., at least every 7 days). Any PCB waste stored inside must be inspected monthly.

3. SAAs do not require inspections, but inspections may be performed as desired by the Project Engineer, or as stated in the site-specific waste management instruction.

4. Less-than-90-day storage areas require weekly inspections in accordance with WAC 173-303-630(6).

5. Inspections of PCB items in storage areas must be inspected weekly by the Project generating and or storing PCB wastes when stored outside or monthly when stored inside. Inspections in these areas should be documented using the Waste Container Storage Inspection Checklist (form WCH-EE-244).

6. Inspection requirements for radioactive waste are described in RC-200-6.4, “Designating and Controlling Radioactive Material Areas (RMAs).”

7. Recycle and Universal Waste accumulation areas do not require inspections, but may be performed as desired by the waste generator, or as stated in the site-specific waste management instruction.

6.0 PROCEDURE

6.1 Conducting Storage Inspections

The Waste Pad Administrator or waste generator will conduct waste container and storage area inspections. Waste container storage inspections are documented using the Waste Container Storage Inspection Checklist (form WCH-EE-24

CAUTION: FOR “NO” ANSWERS / ISSUES THAT CANNOT BE RESOLVED WITHIN 24 HOURS NOTIFY MANAGEMENT IMMEDIATELY

1. Identify the facility, print the name and signature of the inspector(s), and the date and time on the WCH-EE-244 form.

2. Complete the inspection, based on the box checked.

3. Identify discrepancies in the "comments" section of the Waste Container Storage Inspection Checklist.

4. Waste Pad Administrator shall submit all completed Inspection Checklists to WSL for review within 7 days of completion of inspection.

5. Waste Pad Administrator shall submit the WSL reviewed Inspection Checklists to I&AS Document Control within 7 days of completion.

7.0 RECORDS

Records generated by this procedure shall be submitted to I&AS Document Control for processing into the electronic Document Management System (EDMS) or I&AS Records Management in accordance with approved Records Inventory and Disposition Schedules (RIDS) and BSC-1-7.8, "Records Management."

8.0 JUSTIFICATION SUMMARY

Revision	Reason for Revision
8	Changed prepared by to Millard E. Lewis. Changed all internal procedure references from Waste Management & Transportation to Waste Services. Revised WCH-EE-244. Generated new Form (WCH-EE-329) to capture monthly SAA Inspection Requirements. Generated new form (WCH-EE-330) to capture weekly 90-Day Storage Area Inspection Requirements. Deleted **Note** referencing the 1330-N 90 day pad. Revised several sections 5.1. 5.1.1, 5.5.2 and 6.0 incorporating substantive requirements involving the management of CERCLA and PCB waste – including signage and storage time limitations. Inserted new Section Titled “CERCLA Waste Storage Piles”. Editorial changes throughout. This procedure revision addresses IF-2012-0062 and IF-2012-0065.
7	Revised procedure to match wording in ENV-1-1.17 for emergency response, revised PHMC to MSA and the organization title to WM&T.

9.0 REFERENCES

40 CFR 61, Subpart M, "National Emission Standards for Asbestos," *Code of Federal Regulations*, as amended.

40 CFR 260 through 268, "Hazardous Waste Regulations," *Code of Federal Regulations*, as amended.

40 CFR 761, "Polychlorinated Biphenyls (PCBs), Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions," *Code of Federal Regulations*, as amended.

49 CFR 171 through 180, "Transportation," *Code of Federal Regulations*, as amended.

DOE/RL-96-17, Rev. 6, Remedial Design Report/Remedial Action Work Plan for the 100 Area

Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq.

DOE O 435.1, *Radioactive Waste*, U.S. Department of Energy, Washington, D.C.

DOE/RL-2000-25 “Richland Operations Office Implementation Plan for DOE Order 435.1”, U.S. Department of Energy, Richland, Washington.

Ecology, EPA, and DOE, 1998, *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement), as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy, Olympia, Washington.

Ecology, EPA, and RL, 1999, *Environmental Restoration Program Strategy for Management of Investigation-Derived Waste,* Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Richland Operations Office, Richland, Washington. CCN 067483.

Ecology, 2000b, *Effective Date of the 90-Day Storage (Accumulation) Requirement*, Technical Information Memorandum 82-5, Washington State Department of Ecology, Olympia, Washington.

Ecology, 1995, *Responsiveness Summary Amendments to the Dangerous Waste Regulations Chapter 173-303 WAC*, Publication 95-423, Washington State Department of Ecology, Olympia, Washington.

EPA, 1996, *Use of the Area of Contamination (AOC) Concept During RCRA Cleanups*, CCN #093879, Memorandum from M. Shapiro to RCRA Branch Chiefs and CERCLA Regional Managers, dated March 13, 1996, U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C.

NFPA, 2000, *Flammable and Combustible Liquids Codes*, NFPA 30, National Fire Protection Association, Quincy, Massachusetts.

Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901, et seq.

Toxic Substances Control Act of 1976, 15 U.S.C. 2601, et seq.

Uniform Fire Code, International Fire Code Institute, Austin, Texas.

WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code*, as amended.

WAC 173-350, “Solid Waste Handling Standards”, *Washington Administrative Code*, as amended.BSC-1, Business *Services and Communications Manual,* Washington Closure Hanford, Richland, Washington.

BSC-1-2.4, "Training Requirements"
BSC-1-7.8, "Records Management”

BSC-2, *Property Management Manual*, BSC-2-7.1, "Disposition of Equipment and Material," Washington Closure Hanford, Richland, Washington.

ENV-1, *Environmental Monitoring and Management*, Washington Closure Hanford, Richland, Washington.

ENV-1-1.7, "Environmental Reporting”
ENV-1-1.9, “Cleanup Activities.”
ENV-1-1.17. “Spill Prevention, Response, and Reporting Protocol”
ENV-1-1.18, "Dangerous Waste Training"

RC-200, *Radiological Control Field Procedures*, RC-200-6.4, “Designating and Controlling Radioactive Material Areas (RMAs)*”*, Washington Closure Hanford, Richland, Washington.

SEM-2, *Emergency Management Program,* SEM-2-1.0 “Emergency Management Program”, Washington Closure Hanford, Richland, Washington.

SEM-3, *Incident Response and Investigation,* SEM-3-1.2, "Occurrence Categorization and Reporting", Washington Closure Hanford, Richland, Washington.

WMT-1, *Waste Management* and *Transportation,* Washington Closure Hanford, Richland, Washington.

WMT-1-1.1 “Waste Minimization and Recycling”
WMT-1-1.7, "Waste Tracking, Traceability, and Closeout"
WMT-1-1.8, "Release of Waste Not Controlled as Radioactive”
WMT-1-2.2, “Classifying, Packaging and Communication of Hazardous Materials for Transportation”

10.0 BIBLIOGRAPHY

WCH-51, *Quality Assurance Program Document*, latest revision, Washington Closure Hanford, Richland, Washington.

11.0 FORMS (See WCH Intranet for Current Version of Forms)

WCH-EE-238, WCH Waste Inventory Sheet
WCH-EE-244, Waste Container Storage Inspection Checklist
WCH-EE-329, Monthly Satellite Accumulation Area Inspection Report
WCH-EE-330, Weekly 90-Day Storage Area Inspection Report

12.0 ATTACHMENTS

1. Segregation Table for Hazardous Materials
2. Hazardous Waste Label (Example)
3. Large PCB Marking – M_L (Example)
4. Basic Spill Response Flowchart

Attachment 1: Segregation Table for Hazardous Materials

The letter 'X' displayed at the row/column intersection of two hazard classes or divisions indicates the materials are incompatible and must be segregated from each other. These materials cannot be stored in the same storage facility.

Class or Division	**2.1**	**2.2**	**2.3 Gas Zone A**	**2.3 Gas Zone B**	**3**	**4.1**	**4.2**	**4.3**	**5.1**	**5.2**	**6.1 Liquids PG 1 Zone A**	**7**	**8 Liquid Only**
Flammable gases **(2.1)**			X	O							O	O	
Non-toxic, nonflammable gases **(2.2)**													
Poisonous gas Zone A **(2.3)**	X				X	X	X	X	X	X			X
Poisonous gas Zone B **(2.3)**	O				O	O	O	O	O	O			O
Flammable liquids **(3)**			X	O					O		X		
Flammable solids **(4.1)**			X	O							X		O
Spontaneously combustible materials **(4.2)**			X	O							X		X
Dangerous when wet materials **(4.3)**			X	O							X		O
Oxidizers **(5.1)**			X	O	O						X		O
Organic peroxides **(5.2)**			X	O							X		O
Poisonous liquids PG 1 Zone A **(6.1)**	O				X	X	X	X	X	X			X
Radioactive materials **(7)**	O												
Corrosive liquids **(8)**			X	O		O	X	O	O	O	X		

The letter “O” displayed at the row/column intersection of two hazard classes or divisions indicates the materials are incompatible and must be separated by means of a dike, berm, wall, or other device (e.g., container overpack). Containment systems for incompatible wastes must be separated.

Notes:

- Explosive materials will not be stored at the waste pad; therefore, explosive hazard classes or divisions (1.1, 1.2, 1.3, 1.4, 1.5, and 1.6) are not included in the above table.
- This chart only addresses incompatibilities relevant to hazardous material/waste storage at a waste pad. Requirements for the management of incompatible materials during transportation are identified in 49 CFR 177.848
- Storage of waste with a pH of <2.0 or >12.5 shall be separated by a physical barrier or secondary containment. Acids and bases are incompatible with one another and will react if allowed to mix.

Attachment 2: Hazardous Waste Label (Example)

HAZARDOUS WASTE

STATE AND FEDERAL LAW
PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST POLICE, OR
PUBLIC SAFETY AUTHORITY, AND THE
WASHINGTON STATE DEPARTMENT OF ECOLOGY,
OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY

PROPER D.O.T.
SHIPPING NAME _____ UN or NA# _____

GENERATOR INFORMATION:
NAME U.S. DEPARTMENT OF ENERGY
ADDRESS P.O. BOX 550, 2355 STEVENS DR.
CITY RICHLAND STATE WA ZIP 99352
EPA ID NO. WA7890008967
EPA WASTE NO. _____
ACCUMULATION START DATE _____
MANIFEST DOCUMENT NO. _____

HANDLE WITH CARE!

CONTAINS HAZARDOUS OR TOXIC WASTES
STYLE WMSPEC-P

Printed by LABELMASTER, Div. of AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800) 621-5808

Attachment 3: Large PCB Marking – M, (Example)

CAUTION

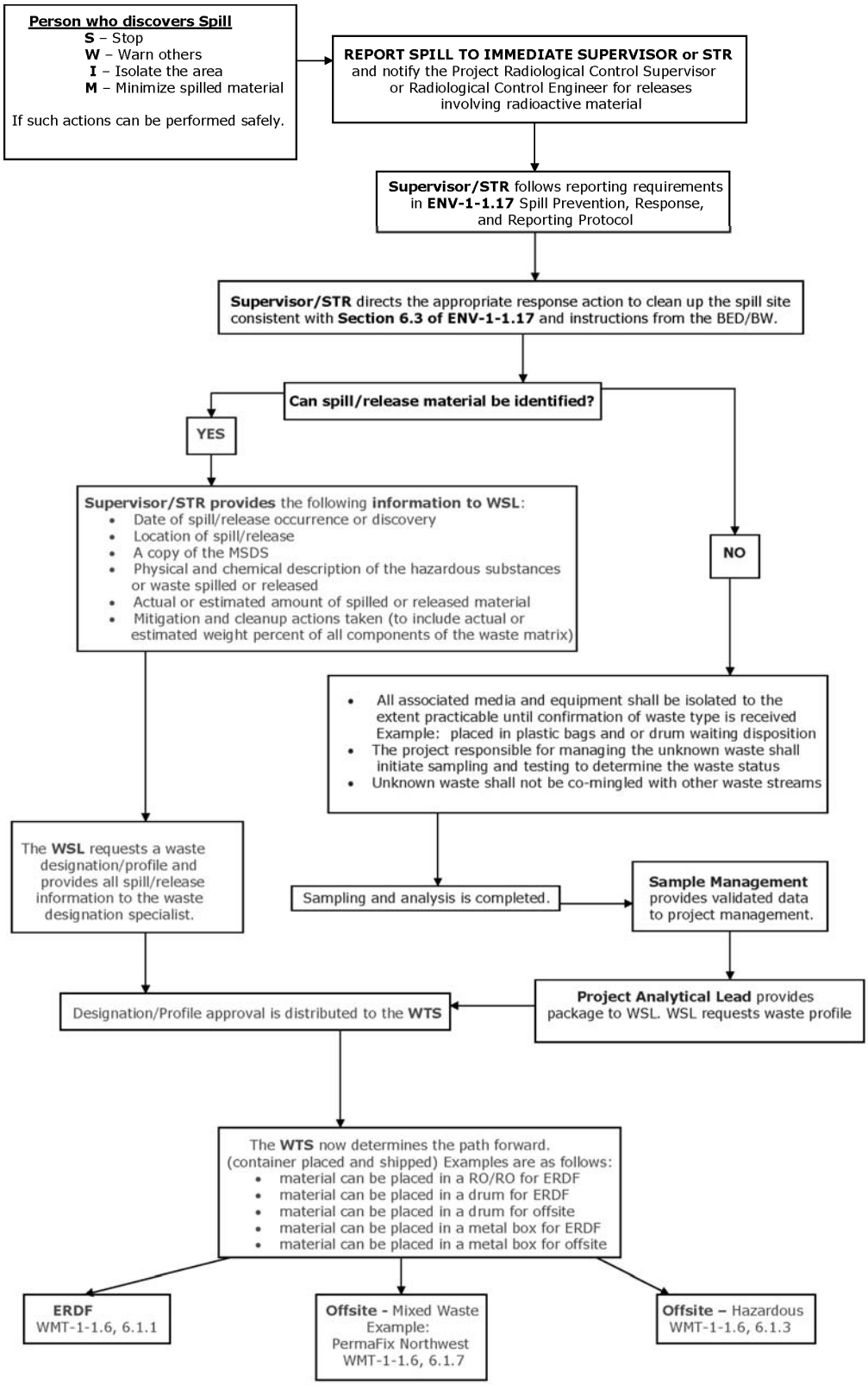
CONTAINS

PCBs

(Polychlorinated Biphenyls)

A toxic environmental contaminant requiring special handling and disposal in accordance with U.S. Environmental Protection Agency Regulations 40 CFR 761-For Disposal Information contact the nearest U.S. EPA Office

In case of accident or spill, call toll free the U.S. Coast Guard National Response Center: 800: 424-8802

Also Contact:
Tel. No.

Attachment 4: Basic Spill Response Flowchart