

Ownership matrix	RPP-27195
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**1.0 PURPOSE AND SCOPE**

(7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.1.6, 7.1.7, 7.1.8, 7.1.9, 7.1.10, 7.1.11, 7.1.12, 7.1.13, 7.1.14, 7.1.15, 7.1.16, 7.1.17, 7.1.18, 7.1.19, 7.1.20, 7.1.21)

This procedure details the Washington River Protection Solutions, LLC (WRPS) process for the management of chemicals at non-laboratory facilities. The purpose of this procedure is to protect the worker, general public, and the environment. This procedure is used to comply with applicable regulations and statutes, and the requirements established by TFC-PLN-58. This process also implements Core Function 2, “Analyze Hazards,” as part of the Integrated Safety Management System (ISMS) core functions and guiding principles.

This procedure applies to all WRPS personnel and subcontractors involved in the acquisition, receipt, storage, inventory, justification, or disposition of chemicals at WRPS-managed facilities with the following exceptions:

- Employee owned chemicals brought on site for personal use such as cosmetics, medicines, and sanitizing wipes. However, any items prohibited from disposition in general trash such as spent pressurized containers (including aerosol cans), vaping cartridges, non-empty containers or batteries must be taken home for disposition.
- Chemical Management activities at the 222-S Laboratory Complex are performed in accordance with ATS-310, Section 4.5, ATS-LO-150-063, ATS-LO-150-062.
- Chemicals needed to support a subcontract issued per TFC-BSM-CP\_CPR-C-05 will be acquired and tracked as identified in the subcontract documents.
- Non-aerosol, non-pressurized consumer-packaged, general office supplies, sunscreen, medicines and first aid supplies are exempt from this procedure, when used for the intended purpose in the intended setting. The duration and frequency of use shall be the same as that of a general consumer. Additional information on chemicals that are exempt from this procedure may be found in Attachment A.
- Manufactured items other than a fluid or a particle that are formed to a specific shape or design that is integral to the end use, does not release more than minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk.

For the purpose of this procedure, chemicals are defined as any element, chemical compound, or products containing chemical mixtures. Chemicals that are managed by this procedure include, as a minimum, materials defined as hazardous according to the definitions of the Occupational Safety and Health Administration (OSHA), the National Fire Protection Association (NFPA), or the International Fire Code (IFC) and materials required to be tracked by management. Additional information on chemicals that are managed by this procedure may be found in Attachment A of this procedure.

Use of hazardous chemicals is outside the scope of this procedure. TFC-ESHQ-IH-C-02 addresses requirements, training, and controls needed when using and working with chemicals. Work packages, job hazard analyses, and task-specific procedures address specific requirements that must be implemented when utilizing chemicals.

The transportation of hazardous chemicals and/or materials is outside the scope of this procedure. Hazardous chemicals and/or materials are shipped in accordance with TFC-PLN-58. Contact the Transportation Safety Officer before transporting or shipping hazardous chemicals.

Management of Hazardous/Dangerous waste as defined in accordance with WAC-173-303 is outside the scope of this procedure. This includes the chemical and radiological wastes in tank farms.

With regard to Emergency Planning and Community Right-to-Know Act (EPCRA) reporting and notifications, the Hanford Site is listed by the Environmental Protection Agency (EPA) as a single facility reporting under Community Right-to-Know ID# WA7890008967. WRPS provides required inventory and use information to the Hanford Site EPCRA subject matter expert for use in preparing Hanford Site EPCRA reports and notifications.

## **2.0 IMPLEMENTATION**

This procedure is effective on the date shown in the header.

## **3.0 RESPONSIBILITIES**

### **3.1 Waste Services Manager**

(7.1.8, 7.1.9, 7.1.20, 7.1.21)

- Approves and certifies any WRPS chemical management reports that are necessary to meet regulatory requirements.
- Provides oversight and maintenance of chemical management program.

### **3.2 Managers/Line Managers**

(7.1.1, 7.1.4, 7.1.16, 7.1.19, 7.2.20, 7.1.21)

- Ensure chemical management operations, including acquisitions, use, storage, transportation, and final disposition, in compliance with the requirements of TFC-PLN-58, TFC-ESHQ-IH-C-02, and this procedure.
- Promote the selection and use of chemicals that minimize hazards and meet Sustainable Acquisition (SA), also known as Environmentally Preferred Purchasing, requirements in accordance with TFC-POL-30.
- Ensure personnel handling the chemicals are trained in accordance with the applicable OSHA Standards and WRPS training requirements in accordance with TFC-PLN-61.
- Ensure personnel contact a WRPS Waste Services Shipper for guidance before transporting hazardous chemicals via a motor vehicle.

### **3.3 Chemical Management Program**

(7.1.1, 7.1.7, 7.1.8, 7.1.9, 7.1.12, 7.1.13, 7.1.14, 7.1.20)

- Ensures the chemical inventory data, applicable source reduction/recycling information per 42 USC 13106, data certifications, and contractor certifications (as applicable) that are submitted to support the Hanford Site preparation of the following Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA) reports. Manage the submitted information as record material.

- Tier II Emergency and Hazardous Chemical Inventory report as required by 40 CFR 370
- Toxic Chemical Release Inventory report as required by 40 CFR 372.
- Verifies chemical management procedures include required Emergency Preparedness Hazard Assessment screening requirements in accordance U.S. Department of Energy (DOE) Order 151.1C.
- Maintains the tank farm chemical inventory information in the Hanford Chemical Inventory Tracking System (CITS).
  - Ensures all chemical storage locations are assigned to an appropriate CITS Inventory Control Group
  - Ensures all chemical inventory is tracked in CITS.
- Assists in correcting problems or issues related to chemical management.

### **3.4 Chemical Owner**

(7.1.1, 7.1.4, 7.1.16, 7.1.19, 7.1.20)

For all chemicals in his/her assigned CITS Inventory Control Group(s) (ICGs), the Chemical Owner shall:

- Ensure a list of all chemical storage locations is developed and maintained, including chemical storage tanks.
- Provide updated chemical storage location information to the Chemical Management POC when chemical storage locations are added or removed from service as chemical storage locations.
- Assigns the CITS Inventory Control Group Contact(s) for the identified storage locations.
- Ensure annual review of identified old and/or expired chemicals is completed.

### **3.5 All Employees**

(7.1.1, 7.1.2, 7.1.4, 7.1.16, 7.1.19, 7.1.20, 7.1.21)

The term employees, includes both WRPS and subcontractor staff performing work under the scope of this procedure.

- Acquire chemicals following the steps in Section 4.1. This includes chemicals obtained from other site contractors or as vendor samples. The only exceptions are chemicals identified as exempt from this procedure in Section 1.0.
- Acquire chemicals tracked as fixed inventory items in accordance with Section 4.1 of this procedure.

- Read and understand information on the specific hazards and handling requirements before using chemicals. This information may be found on the manufacturer's label, Safety Data Sheet (SDS)/Material Safety Data Sheet (MSDS), and work control documents and procedures.
- Store, segregate, and rotate chemicals in accordance with the recommendations of the manufacturer, or as indicated by the accepted industrial practices and in accordance with this procedure.
- Follow the steps outlined in Section 4.4.3 of this procedure when moving chemicals to a new storage location.
- Follow the specific precautions in Section 4.4.2 when storing or handling time-sensitive chemicals.

### **3.6 Industrial Hygiene**

(7.1.1, 7.1.2, 7.1.4, 7.1.13)

- Answers questions regarding chemical constituents and substitutions.
- Performs chemical hazard assessments, as applicable.
- Answers questions regarding appropriate storage locations including any needed segregation for incompatible chemicals.
- Supports Security and Emergency Services in performing Emergency Preparedness Hazard Assessment (EPHA) quantitative analyses for chemical hazards to meet the requirements of DOE O 151.1C.
- Assists in identifying and implementing appropriate exposure controls.

### **3.7 Industrial Safety**

(7.1.2, 7.1.15, 7.1.18)

- Answers questions regarding proper storage of flammable and combustible materials.
- Answers questions in determining a path forward should issues arise with time sensitive or reactive chemicals.

### **3.8 Security and Emergency Services**

(7.1.7, 7.1.13, 7.1.14, 7.1.17, 7.1.19, 7.1.20)

- Ensures applicable Emergency Preparedness evaluations (e.g., Hazard Surveys) are conducted.
- Reviews individual acquisition requests for Emergency Preparedness considerations, as indicated by the results of the EPHA Screening in section 4.2.
- Performs emergency preparedness hazard planning assessment (EPHA) analyses, as needed.

**3.9 Fire Protection**

(7.1.2, 7.1.15, 7.1.18)

- Answers questions regarding proper storage of flammable and combustible materials.
- Answers questions regarding evaluating new chemical storage locations against the criteria in DOE O 420.1C and MGT-ENG-IP-05.
- Answers questions regarding determining path forward should issues arise with time sensitive or reactive chemicals.

**3.10 Waste Services**

(7.1.12, 7.1.16, 7.1.19)

- Assists in identifying appropriate disposition pathways for both used and unused forms of a chemical.
- Answers questions regarding planning for final disposition of chemicals.

**3.11 Engineering**

(7.1.2, 7.1.13, 7.1.15, 7.1.19)

- Answers questions related to ensuring incoming quantities of chemicals will be allowed within a facility's safety basis envelope.
- Ensures the chemical is approved for use in RPP-11192 if the chemical has the potential to enter a waste tank (e.g., through a pit drain or ventilation condensate system).

**3.12 Procurement Services**

(7.1.10, 7.1.16, 7.1.20)

- Processes requests for chemicals in accordance with TFC-BSM-CP\_CPR-C-01 and TFC-BSM-CP\_CPR-C-06 or TFC-BSM-CP\_CPR-C-05 as applicable.
- Makes information related to the DOE SA, available to the planner/requestor in accordance with TFC-BSM-CP\_CPR-C-01 and TFC-BSM-CP\_CPR-C-06 or TFC-BSM-CP\_CPR-C-05 as applicable. Provides the planner/requestor with information about environmentally preferable alternatives for requested chemicals in accordance with TFC-PLN-123.
- Follows the steps outlined in Section 4.3 of this procedure when receiving chemicals, in accordance with TFC-BSM-CP\_CPR-C-18 and any special instructions stated in the material request (MR).
- Assists users in excessing unwanted, unused chemicals in accordance with TFC-BSM-FPM\_PR-C-01.

**3.13 Construction and Commissioning**

(7.1.1, 7.1.2, 7.1.4, 7.1.7, 7.1.8, 7.1.9, 7.1.12, 7.1.13, 7.1.19, 7.1.20)

- Ensures WRPS Chemical Inventory Worksheet (A-6006-240) and instructions are provided to subcontractors when the Chemical Management POC and the Buyer's Technical Representative grant an exception to individual container tracking.
- Communicates requirement to submit the applicable Chemical Inventory form at the time of initial submittal, to provide updated chemical inventory information and at the conclusion of the project or contract.
- Ensures submittals, including the Chemical Inventory Worksheet (A-6006-240) are managed as record material in accordance with TFC-PRJ-CM-C-01.

**3.14 Subcontractors**

(7.1.1, 7.1.2, 7.1.4, 7.1.7, 7.1.8, 7.1.9, 7.1.11, 7.1.13, 7.1.19, 7.1.20)

When the Chemical Management POC and the Buyer's Technical Representative grant an exception to individual container tracking, the WRPS Chemical Inventory Worksheet (A-6006-240) shall be used for chemical inventory submittals. Any exceptions to use of this form must be approved by the chemical management POC and documented in the subcontract Statement of Work.

Any unused subcontractor chemicals will be removed from the site at the completion of the subcontract release. Any exception to this requirement, such as the turnover of chemicals to another subcontract or to WRPS in lieu of removal, must be explicitly approved by the Chemical Management POC.

- Provide the following chemical inventory information in accordance with the subcontract submittal requirements, including the Master Submittal Log.
  - Submit an inventory of chemicals for approval prior to bringing the chemicals on site.
  - Provide container specific information, and estimated date of arrival or actual date of arrival within five (5) days of chemicals arriving on site if the information is not provided as part of the initial submittal.
  - Provide disposition information (use, waste and/or removal) at the end of the calendar year and at the completion of the subcontract.

**4.0 PROCEDURE**

(7.1.1, 7.1.2, 7.1.4, 7.1.7, 7.1.8, 7.1.9, 7.1.20, 7.1.21)

The Hanford Chemical Inventory Tracking System (CITS) database is used to provide a central location for chemical management information.

Compressed gases are managed in accordance with TFC-ESHQ-S-STD-25.

Flammable and combustible liquids are managed in accordance with TFC-ESHQ-FP-STD-03.

Unless otherwise noted, procedure steps may be performed out of sequence, as needed.

Unless directed differently, notifications required in the performance of this procedure may be made by e-mail, memo, or other suitable written or electronic method. Information may be sent to the Tank Farm Chemical Management POC via contact information provided on the WRPS Chemical Management webpage.

See Figure 1 for procedure flowchart.

**CAUTION:** A damaged or leaking container may present hazards to workers and/or the environment. Implement actions of TF-AOP-011 as applicable. Ensure any necessary controls and protections are in place before attempting to mitigate or clean up a spill.

#### **4.1 Chemical Acquisition**

(7.1.1, 7.1.2, 7.1.4, 7.1.7, 7.1.8, 7.1.11, 7.1.12, 7.1.16, 7.1.19, 7.1.20, 7.1.21)

Acquisition of chemicals shall include the actual purchasing of chemicals or any other means of acquiring chemicals. Examples include but are not limited to:

- Obtaining chemicals from another Hanford Site contractor or subcontractor
- Obtaining chemicals as free samples.

Whenever possible, less hazardous alternatives should be considered when acquiring chemicals. Contact Industrial Hygiene for assistance in identifying less hazardous alternates.

Acquisition of chemicals should include a comparison against, and be in accordance with, all applicable SA requirements including the U.S. Department of Agriculture designated biobased-content products, as well as EPA Significant New Alternatives Policy (SNAP), Program acceptable substitutes for Ozone Depleting Substances (ODS), as specified in TFC BSM CP\_CPR-C-01, TFC-BSM-CP\_CPR-C-06, and TFC-POL-30. Exemptions to certain SA requirements may be made based on the Cost too high, Availability, or does not meet Performance criteria (CAP). A written justification is required for any SA exemptions and must be submitted as part of the requisition process. Additional information on SA requirements may be found on the WRPS Procurement's Sustainable Programs webpage.

Only Material Coordinators may use a Purchasing Card to acquire chemicals subject to the Chemical Management Plan (TFC-PLN-58).

Acquisition of carcinogens is subject to additional controls and restrictions. See TFC-ESHQ-IH-STD-11 for information on identification and control of carcinogens.

If a chemical is being acquired through a means other than purchasing, at a minimum, steps 1, 2, 3, 6, 7, 8, and 9 of this section are to be completed prior to obtaining the material for use. Industrial Hygiene must also be notified to ensure the acquisition is reviewed in accordance with TFC-ESHQ-IH-C-02.

If an appropriate SDS/MSDS is not on file with the Hanford SDS/MSDS administrator, or if the existing SDS/MSDS is more than two years old, the request shall not be approved until:

- It is verified the existing SDS/MSDS is still current, OR

- An updated SDS/MSDS is provided to an Industrial Hygienist or the Chemical Management POC.

A chemical owner and intended storage location must be identified for each chemical acquisition.

NOTE: Steps 1 through 4 may be performed out of order as appropriate.

Requestor

1. Determine the specific chemicals and the minimum quantity required for use in the near term (e.g., six months or less; do not stockpile material inventories).
2. If ordering flammable or combustible liquids, refer to procedure TFC-ESHQ-FP-STD-03 to ensure the requested quantity is within allowed limits for the intended storage location.
  - a. Contact Fire Protection for assistance as needed.
3. Ensure an appropriate storage location has been identified for the chemical in accordance with Section 4.4.1 of this procedure.
  - a. Contact Industrial Safety for assistance as needed.
  - b. If the delivery location is not intended storage location, notify the chemical management POC of the intended storage location.

NOTE: The chemical management POC can provide assistance in identifying the manager assigned as the chemical owner for a specific location or project.

4. If the requestor's manager will not be assigned as the chemical owner, provide the chemical management POC with the name of the chemical owner.

NOTE 1: The following steps require access to Enterprise Asset Management (EAM). Your manager can assist in determining if you need to request access.

NOTE 2: All requested items must have an appropriate Catalog Identification (CID) to be able to initiate an MR in EAM.

5. Using the EAM "Parts Search Tool" determine if there is an appropriate CID for each desired chemical.
  - a. If there is an appropriate CID, skip to step 7.

NOTE 1: Attachment B contains guidance on the type of specific information that should be included for chemical requests.

NOTE 2: OSHA requirements state that a Safety Data Sheet must list the manufacturer name, address and phone number as well as an identifier that matches an identifier on the label. In order to ensure the appropriate SDS is identified, chemical Cat IDs require manufacturer and product specific identifiers.

NOTE 3: Because Hanford SDS/MSDS numbers can change without notice, Hanford SDS/MSDS numbers should not be included in the catalog description.

6. Submit a CID request providing chemical specific information including the desired container size.
7. Initiate a material request in accordance with TFC-BSM-CP\_CPR-C-01 and TFC-BSM-CP\_CPR-C-06.
  - a. Assign both Chemical Management and Industrial Health as approvers per the Determination of Required Approvals (DRA).

NOTE: The WRPS SDS/MSDS Search Guide, available on the WRPS Chemical Management webpage, can assist in using the Hanford SDS/MSDS system to identify the appropriate SDS/MSDS.

Chemical Management POC or Delegate

- b. Enter either the Hanford SDS/MSDS number for the current version of the SDS/MSDS in the Hanford SDS/MSDS System, or, provide a copy of the current SDS/MSDS to the chemical management POC.
8. Determine if the chemical(s) is/are exempt from chemical management requirements as defined in Section 1.0 of this procedure.
  - a. For each exempt chemical, note the exemption type as a comment using the Actions drop down in the "Parts" tab of the MR.
  - b. If all chemicals in the request are exempt from chemical management requirements, go to step 12.
  - c. If there are any chemicals in the request that are not exempt from chemical management requirements, go to step 9.
9. For each non-exempt chemical being requested, perform the Chemical Management acquisition review in accordance with Section 4.2 of this procedure.

Chemical Management POC or Delegate

10. Based on completion of the Chemical Management POC Procurement Review in Section 4.2 of this procedure, determine if the material being requested will be tracked as a chemical in CITS.
  - a. If the chemical will be tracked, go to step 11.
  - b. If the chemical will not be tracked, note that the chemical does not require barcoding as a special instruction in the MR and go to step 12.
11. Determine if the chemical is suitable for tracking as a “fixed inventory item” in accordance with Section 4.4.4, as appropriate.
  - a. If the chemical will be managed as a “fixed inventory item,” note “fixed inventory item, no barcode required” as a special instruction in the MR.
    - 1) Create a new fixed inventory system in CITS, as needed.
  - b. If individual container tracking is required, note that container barcodes are required as a special instruction in the MR.
12. Check the CITS database and the Hanford Excess Property Bulletin Board to determine if the requested product is already available and meets the cost criteria in TFC-BSM-CP\_CPR-C-06.
  - a. If the product is available, continue to step 13.
  - b. If the product is unavailable, skip to step 14.
13. If the chemical is available and in good condition, direct the requestor determine if the available product will meet the needs of the user.
  - a. If the user verifies the available chemical is acceptable, as requested, assist in transfer of the product and state on the material request that the chemical is available on-site and no additional chemical is to be purchased.
  - b. If the available product will not meet the needs of the user, continue with the procurement process.
14. Once it has been determined that there is no suitable existing inventory, the chemical tracking determination has been completed and tracking instructions have been entered as a special instruction in the MR, approve or reject the MR in accordance with TFC-BSM-CP\_CPR-C-06.

#### **4.2 Chemical Management POC Chemical Acquisition Review**

(7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.1.6, 7.1.7, 7.1.8, 7.1.11, 7.1.12, 7.1.13, 7.1.14, 7.1.15, 7.1.16, 7.1.17, 7.1.19, 7.1.20)

NOTE: With the exception of steps 3 through 9, the steps in this section may be performed out of sequence or in parallel.

The Emergency Preparedness Hazard Assessment (EPHA) Screening is incorporated as steps 3 through 8 of this review.

Unless otherwise noted, all steps are performed by the Chemical Management POC or delegate.

The purpose of performing the EPHA screening is to identify those chemicals which, in the event of an uncontrolled release, would:

- Immediately threaten or endanger those who are in close proximity to the event;
- Have a potential to disperse beyond the immediate vicinity of the release point and threaten the health and safety of onsite personnel or the public; and
- Disperse at a rate that requires time-urgent response to implement effective protective actions for workers and the public.

For chemicals, the overriding emergency management concern is the acute human toxicity of the substances by the airborne pathway including exposures by inhalation, dermal contact, absorption through the eyes and mouth/nose, etc.

Chemical  
Management  
POC or Delegate

1. Determine if there is an SDS/MSDS for the requested chemical(s) entered in the Hanford MSDS Database.
  - a. If a Hanford MSDS reference is provided, verify the reference matches the requested chemical and note the date of the MSDS.
  - b. If there is no SDS/MSDS in the Hanford database or the MSDS is more than two years old, as requested, assist in verifying the existing SDS/MSDS is the current version or obtaining an updated SDS/MSDS.
  - c. As needed, submit any new or updated SDS/MSDS to the Hanford MSDS administrator.
2. Determine if the storage location has been identified.
  - a. If the storage location is not identified, direct the requestor provide the storage location.
  - b. If the chemical owner of the identified storage location is neither the requestor nor a manager on the MR routing list, notify the chemical owner of the requested chemical and request approval to place the chemical in intended storage location.
  - c. If, the intended chemical owner does not concur with the request, notify the requestor that another storage location must be identified and chemical owner concurrence be obtained before the request can be approved.

3. Determine if the chemical is commonly available to and used by the general public to the extent that it is marketed for personal family or household purpose, and the formulation, container size, and concentration are the same as for products that are distributed without significant restrictions to the public. (Examples include cleaning products, household bleach, motor oil, gasoline, etc.).
  - a. If the chemical meets the criteria for “Common Use,” go to step 10.
  - b. If the chemical is not considered a Common Use chemical, go to step 4.
4. Determine if the chemical has an NFPA health hazard rating of 3 or 4.
  - a. If the chemical has an NFPA health hazard of 0, 1, or 2, go to step 10.
  - b. If the chemical has an NFPA health hazard of 3 or 4 or if no NFPA health hazard rating is listed, go to step 5.
5. Determine if the chemical is declared to be non-hazardous according to the OSHA Hazard Communication Standard.
  - a. If the chemical does not classify as hazardous, go to step 10.
  - b. If the chemical classifies as hazardous, go to step 6
6. Determine if the individual containers exceed 5 gallons or 40 lbs. (10 lbs. for compressed gas), or if the total aggregate quantity exceeds 50 gallons or 400 lbs (100 lbs. for compressed gas).
  - a. If the quantity thresholds are not exceeded, go to step 10.
  - b. If the quantity thresholds are exceeded, go to step 7.
7. Determine if the chemical meets the following dispersibility criteria:
  - The substance is a solid at normal temperatures and the material is a powder.
  - The substance is a liquid at normal temperatures and the vapor pressure is 1mmHg or greater at about 25 degrees C (77 degrees F).
  - a. If the chemical does not meet the dispersibility criteria, continue to step 10.
  - b. If the chemical meets the dispersibility criteria, go to step 8.

8. If the requested material did not screen out for further EPHA consideration based on questions 3-7 of this review, determine if Emergency Services has already reviewed and approved the request.
  - a. If Emergency Services has approved the request, go to step 10.
  - b. If Emergency Services has not approved the request, go to step 9.
9. Reject the MR and provide the following information to the requestor and Emergency Services:
  - The results of the EPHA screen
  - Direction for the requestor to contact Emergency Services for assistance in determining an appropriate path forward regarding the requested material.
10. Determine if this request will result in co-located storage location exceeding quantity threshold specified in 29 CFR 1910.119.
  - a. If the request will not exceed any thresholds in 29 CFR 1910.119, go to step 11.
  - b. If this request will result in co-located storage locations exceeding a specified quantity threshold specified in 29 CFR 1910.119, reject the MR and direct the requestor to contact the Industrial Safety and Environmental Requirements Area Managers to determine an appropriate path forward regarding the requested material.

NOTE: The EPA Consolidated List of Lists Under EPCRA/CERCLA/CAA§112® can assist in identifying quantity thresholds for specific chemicals subject to 40 CFR 68.130, 40 CFR 302.4 and 40 CFR 355.

11. If this request will result in WRPS exceeding any emergency planning quantity thresholds specified in 40 CFR 68.130 or 40 CFR 302.4, reject the request directing the requestor to contact Emergency Services for assistance in determining if the request needs additional Emergency Preparedness consideration.
12. If this request includes any chemicals identified as Extremely Hazardous Substance (EHS) per 40 CFR 355, note in the comments section for each applicable item that the product is regulated as an EHS chemical.
13. If the quantity of any chemical request is greater than 50% of the reportable quantity in 40 CFR 68.130, 40 CFR 302.4 or 40 CFR 355, ensure that Environmental is notified of the request.
14. Upon completion of the Chemical Acquisition Review, go to Section 4.1, step 7.

### 4.3 Receiving Hazardous Materials

(7.1.2, 7.1.4, 7.1.7, 7.1.8, 7.1.9, 7.1.19)

When receiving hazardous materials, be alert to unexpected chemical hazards resulting from damaged or leaking containers.

- |   |  |
|---|--|
| Material<br>Coordinator                   | <ol style="list-style-type: none"><li>1. Receive and verify shipment is a material ordered per TFC-BSM-CP_CPR-C-18.</li><li>2. Check for instructions to determine if the item requires individual container barcodes.<ol style="list-style-type: none"><li>a. If the item does not require barcoding, release the material to the requestor in accordance with TFC-BSM-CP_CPR-C-18.</li><li>b. If the item requires barcodes, contact the Chemical Management POC to have the containers barcoded.</li></ol></li></ol>  |
| Material<br>Coordinator                   | <ol style="list-style-type: none"><li>3. If an unordered chemical is received, (e.g., a product substitution, or an operating fluid included “free of charge” as part of an equipment order), mark as “DO NOT USE” and contact the requestor to determine if the item is acceptable.<ol style="list-style-type: none"><li>a. If the item is not accepted by the requestor, manage in accordance with TFC-BSM-CP_CPR-C-18.</li><li>b. If the item is accepted by the requestor, contact the Chemical Management POC for assistance.</li></ol></li></ol>   |
| Chemical<br>Management<br>POC or Delegate | <ol style="list-style-type: none"><li>4. If an unordered chemical is received, determine if it is exempt from management as a chemical in accordance with this procedure.<ol style="list-style-type: none"><li>a. If the item is identified as exempt from barcoding, direct the Material Coordinator to release the material to the requestor in accordance with TFC-BSM-CP_CPR-C-18.</li><li>b. If the item is not exempt, ensure it is managed as an item acquired by a means other than purchasing as outlined in Section 4.1 then receive and barcode in accordance with this procedure.</li></ol></li><li>5. Using a copy of the material request or other procurement information, verify the received item is the same as what was ordered<ol style="list-style-type: none"><li>a. If the item is the same as what was ordered, continue the receiving process.</li><li>b. If the item is not the same as what was ordered, manage as an unordered chemical.</li></ol></li></ol> |

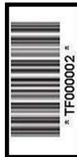
NOTE: An expiry may be identified as a formal expiration date or with a less formal term such as “use by” or “best by” date.

6. As applicable, verify the received product is not expired.
  - a. If the item is expired and the expiry is related to safety or assigned QL-1, -2, or 3, notify the material coordinator that the item may not be received and halt the receipt process in this procedure.
  - b. If an item is expired for quality considerations only, and the item is assigned GS QL-0, direct the material coordinator to contact the requestor to obtain guidance on whether the item will be accepted and halt the receipt process in this procedure.
  - c. If notified by the material coordinator that the material has been determined to be acceptable for the intended use, restart the receipt process in this procedure.

NOTE: The default location for barcode label is vertical orientation near the upper left area of the front (main) label. For some containers, additional considerations may preclude use of the default location (e.g., not enough unprinted space, products may have an outer and inner container, the default location is difficult to access on in-service containers). Avoid horizontal orientation as many containers are cylindrical, and barcodes are more difficult to scan on a curved surface.

Chemical  
Management  
POC or Delegate

7. Attach the barcode label to a clean, dry, durable container surface.
  - Lacking other considerations, place the label in a vertical orientation near the upper left area of the main label.
  - Chemical Barcode Label Example:



NOTE: It is recommended that a copy of the material request be used in this step as it will contain much of the required information and only need to be annotated to capture the remainder.

8. Obtain the following information (as applicable):

- Barcode number
- Product name
- Manufacturer name
- Manufacturer's product or catalog code
- Hanford SDS/MSDS number
- Container size (e.g., 1-qt, 3-gm, 2-liter, 225-cft)
- Container type (e.g., can/metal, bottle/plastic, can/aerosol)
- Expiry date
- Date received
- Storage location
- MR number
- Order Number.

Material  
Coordinator

9. Once barcoded (as applicable), turn the material over to the requesting organization.

ICG Contact or  
Requestor

10. Safely store the material in an appropriate location using segregation practices as needed to separate incompatible materials in accordance with TFC-PLN-58, TFC-ESHQ-FP-STD-03, and this procedure.

11. As appropriate, for chemicals with a limited shelf life, ensure the date the chemical expires is printed or written on the container.

NOTE: Additional information may be entered as appropriate.

12. Enter the container information as a "New Inventory Item" in CITS, and include all information obtained in Step 8.

NOTE: If for some reason, a CITS item entry cannot be moved from temporary to active CITS inventory within the identified time limits, send the container information directly to the Hanford EPCRA Subject Matter Expert.

Chemical  
Management  
POC or Delegate

13. Ensure inventory items entered into CITS are in the active inventory (not in Temporary inventory):

- Within 14 days of receipt if the product is regulated under 40 CFR 355 as an EHS
- Within 45 days of receipt for non-EHS materials
- By January 5 for items received between December 15 and December 31 of the previous calendar year, or as directed by the Hanford EPCRA Subject Matter Expert.

#### **4.4 Storing and Tracking Chemicals**

##### **4.4.1 Chemical Storage Requirements**

(7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.14, 7.1.15, 7.1.18, 7.1.19, 7.1.20)

Chemical products should be stored separately from general supplies for safety and ease of inspection.

Rotate the new product with existing stock so that the oldest stock is available first.

Chemical storage locations must be kept clean and orderly. Keep all chemical/product containers tightly covered or closed when not in use.

Keep the minimum chemical inventory necessary for uninterrupted operation to reduce fire, personnel exposure, and waste disposal hazards.

Proper stacking procedures must be followed when storing chemicals. Stack containers so that they will not be unstable or become dislodged or fall.

##### **1. Chemical Compatibility.**

All chemicals are stored according to compatibility in accordance with the recommendations of the manufacturer (e.g., SDS/MSDS, label information) or as indicated by accepted industrial practices. This includes manufacturer's recommendations for temperature and humidity control and chemicals with radioactive hazards.

Separate storage locations or specially designed cabinets (e.g., flammable storage cabinets) may be used to segregate incompatible chemicals. At a minimum, the following groups of chemicals must be stored segregated from each other:

- Flammable and combustible liquids
- Flammable and combustible solids
- Inorganic acids
- Oxidizing acids
- Organic acids
- Bases (caustics)
- Oxidizers
- Organic peroxides.

If there are any questions about chemical compatibility, contact the facility Industrial Hygiene POC.

##### **2. Unlabeled Chemical Containers.**

NOTE: Laboratory-Use chemical containers shall be managed in accordance with ATS-LO-150-063.

All containers shall be properly labeled. If unlabeled (or improperly labeled) containers are found, they shall be immediately taken out of service.

- a. If the contents are known, the container shall be labeled in accordance with TFC-ESHQ-IH-C-02. If there are no additional safety concerns, the relabeled container may be returned to service.
- b. If the contents are unknown, notify manager/supervisor in accordance with TFC-ESHQ-IH-C-02.

3. Chemical Compatibility with Waste Tanks.

Chemicals that have the potential to enter a waste tank (e.g., through a pit drain or ventilation condensate system), must be evaluated and approved for use in accordance with RPP-11192. Chemicals listed in RPP-11192, must be managed in accordance with the identified limitation(s).

Contact Engineering to request an evaluation for any chemical or the use condition for an approved chemical that is not addressed by RPP-11192 before storing, staging or using it in a manner where there is a potential for it to enter a waste tank.

4. Flammable Chemical Storage Requirements.

Quantities of flammable materials that may be stored in any one area are limited. Restrictions also limit the number of flammable storage cabinets that may be located in any one fire area. Only approved containers and cabinets are used for the storage of flammable materials. Refer to TFC-ESHQ-FP-STD-03 for the specific requirements that must be followed when storing and handling flammable and combustible liquids.

Contact Fire Protection for assistance in determining specific flammable material storage limits and controls.

5. Hazardous Material Storage Facilities.

Hazardous material storage facilities are subject to additional design and operational controls in accordance with NFPA requirements. See TFC-ESHQ-FP-STD-13 for requirements related to identified hazardous material storage facilities.

6. Outdoor Storage Locations.

Barrels and smaller containers of chemicals in a storage yard should be protected/shielded from direct sunlight to protect against content degradation, overheating, container bulging, or rupture.

When flammable storage cabinets are located outdoors, plugs in the vent holes should be removed to prevent accumulation of vapors.

7. Chemical Storage Tanks.

Adjacent storage tanks containing incompatible chemicals are provided with separate secondary containment structures to prevent mixing in the event of leaks or tank failure.

Chemical storage tanks containing hazardous chemicals must be cleaned when the tanks are emptied or when the chemical in the tank is changed. All requirements of DOE-0360 must be addressed when tank entry is necessary.

#### 4.4.2 Reactive and Time-Sensitive Chemicals

(7.1.1, 7.1.2, 7.1.19, 7.1.20)

Reactive chemicals are those chemicals that undergo rapid and violent chemical reaction when exposed to incompatible conditions such as heat, spark, air, or light, or that undergo explosive decomposition due to impact, friction, or grinding.

Time-sensitive chemicals are those chemicals or chemical products that develop additional hazards upon prolonged storage. Chemicals that are peroxidizable or auto-polymerize are examples of time-sensitive chemicals.

Some products contain stabilized formulations of reactive or time-sensitive chemicals and have reduced or delayed potential for forming hazardous by products. As a result, they will have extended expiration dates.

Products that may contain stabilized formulations of reactive or time-sensitive chemicals include but are not limited to:

- Catalysts containing methyl ethyl ketone peroxide (MEKP)
- PVC pipe primers
- Engine starting fluids.

All reactive and time-sensitive materials should be monitored and properly disposed of according to the expiration date. If these materials are left in storage long enough to form hazardous by-products, their management and disposal becomes increasingly hazardous and costly.

#### **WARNING:**

Consider any reactive or time-sensitive chemicals that appear to have been altered to be highly unstable and potentially explosive. Examples of altering include but are not limited to:

- Layering (separation of a liquid into layers with a distinct boundary)
- Crystal formation
- Change in color
- Increased viscosity (indicating evaporation)
- Contamination by other materials.

If any of these signs are present, Stop Work and follow the warning actions below.

- a. Leave the container alone
- b. Isolate the area
- c. Inform the manager or building emergency director (BED).

The manager or building emergency director will contact Industrial Hygiene and the WRPS fire protection representative to identify proper handling and disposal.

#### 4.4.3 Moving Containers to New Storage Locations between Tank Farm Facilities

(7.1.2, 7.1.7, 7.1.19)

Hazardous materials moved via a motor vehicle may be subject to DOT shipping requirements. This includes roads within site boundaries. Contact the Transportation Safety Officer for guidance before transporting chemicals.

NOTE: To help maintain the accuracy of the chemical inventory, employees are encouraged to provide the barcode number and the new storage location of the relocated container to the applicable ICG Contact or the chemical management POC.

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| All Employees                       | 1. When moving containers to a new location, store them in accordance with manufacturer instructions (e.g., container labels, SDS/MSDS). |
| Chemical Management POC or Delegate | 2. As requested, assist in arranging transfer of chemicals between facilities.   |
|                                     | 3. Update the CITS database when notified of a change in storage location.   |

#### 4.4.4 Requesting “Fixed Inventory” Status for a Chemical

(7.1.1, 7.1.4, 7.1.15, 7.1.19, 7.1.20)

CITS has a limited option called “Fixed Inventory Item.” This option permits the tracking of materials that are part of routine inventories as an unchanging inventory item instead of tracking each individual container. This option is used when there are negative factors that outweigh the benefits of individual container tracking.

There are specific conditions that must be met in order to use the “Fixed” option. They include but are not limited to: the relative hazard of the product, the reporting requirements of given product formulation, the rate of inventory turnover, and ergonomic hazards associated with individually barcoding containers. Examples of items that are tracked as fixed inventory include:

- Compressed gases in refillable cylinders
- Consumer products purchased in large quantity and are widely dispersed for use (e.g., bottles of hand sanitizer, non-aerosol windshield de-icer, canned air)
- Large numbers of large containers that pose ergonomic hazards if individually barcoded.

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| ICG Contact or Delegate | 1. Contact the chemical management POC to request the assignment of a fixed inventory item barcode. |
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| Chemical Management POC or Delegate | <ol style="list-style-type: none"><li>2. Determine if the chemical and the conditions are suitable for fixed inventory item status.<ol style="list-style-type: none"><li>a. If fixed inventory status is approved, notify the ICG Contact of the approval, and obtain needed information to set up fixed inventory item in CITS.</li><li>b. If fixed inventory status is not appropriate to the conditions, contact the requesting ICG Contact to determine an appropriate alternative.</li></ol></li></ol> |
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NOTE: A label at the storage location, a copy of a CITS report highlighting this information, a log sheet, or other suitable method may be used for this purpose.

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| ICG Contact or Delegate | <ol style="list-style-type: none"><li>3. Provide fixed inventory information to the ICG Contact that includes the following information:<ul style="list-style-type: none"><li>• Barcode number</li><li>• Product name</li><li>• Hanford SDS/MSDS number</li><li>• Container size with units (volume or weight)</li><li>• Maximum number of containers.</li></ul></li><li>4. Maintain fixed inventory information for the assigned Inventory Control Group that includes the following information:<ul style="list-style-type: none"><li>• Barcode number</li><li>• Product name</li><li>• Hanford SDS/MSDS number</li><li>• Container size with units (volume or weight)</li><li>• Maximum number of containers.</li></ul></li></ol> |
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| Requestor | <ol style="list-style-type: none"><li>5. Request procurement of any replacement inventory as a chemical in accordance with Section 4.1 of this procedure.</li></ol> |
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| ICG Contact or Delegate | <ol style="list-style-type: none"><li>6. Contact the Chemical Management POC if there is any change to the following:<ul style="list-style-type: none"><li>• Storage location</li><li>• Maximum number of containers</li><li>• Product information.</li></ul></li></ol> |
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| Chemical Management<br>POC or Delegate | 7. | Ensure updated information is entered into the CITS.  |
|  | a. | If the change is limited to a change in the maximum number of containers, update the existing container entry (barcode).  |
|  | b. | If the change is to anything other than the maximum number of containers, create a new container entry for the chemical and disposition the old entry when all applicable containers are used or moved. |

#### 4.4.5 Performing a Facility Chemical Inventory

(7.1.1, 7.1.4, 7.1.8, 7.1.9, 7.1.14, 7.1.16, 7.1.19)

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| Chemical Management<br>POC or Delegate | 1. | At least annually, perform a facility chemical inventory for all TOC facilities.  |
| ICG Contact or Delegate                | 2. | As requested, provide access and assistance in performing chemical inventories.   |
| Chemical Management<br>POC or Delegate | 3. | If available, use the barcode reader to scan the chemical container barcodes in performing the chemical inventory.  |
|  | 4. | If un-barcoded chemical containers that meet the criteria for tracking within CITS are found, barcode the container(s), and capture the applicable container and storage location information.                  |
|  | 5. | Update the chemical inventory in the CITS database.   |
|  | a. | Upload inventory data.  |
|  | b. | Create CITS inventory entries for any containers barcoded during the physical inventory.  |
|  | 6. | Reconcile the results of the physical inventory with the inventory listed in CITS.  |
|  | a. | Verify any changes to container entries are correctly updated.  |
|  | b. | disposition existing container entries for items not found during the inventory process, as appropriate.  |
|  | 7. | Submit inventory information to the Hanford EPCRA POC, as required, for the preparation of the Hanford Site (EPCRA) reports:  |
|  |    | <ul style="list-style-type: none"> <li>• Tier II Emergency and Hazardous Chemical Inventory report required by 40 CFR 370</li> <li>• Toxic Chemical Release Inventory report required by 40 CFR 372.</li> </ul> |

8. Provide a copy of the updated inventory of chemicals to the applicable ICG Contact and the chemical owner at least once per calendar year.

NOTE: For chemical management purposes, terms such as a specific best by date listed on the container and explicit shelf life terms (e.g., shelf life is two years from date of manufacture) are also considered to be indications of expiration.

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| ICG Contact or Delegate         | 9. Provide to the applicable ICG Contact at least once per calendar year, a chemical use review and justification report listing of chemical inventory items that are identified as older than three years, expired, or past the recommended use date. |
| Chemical Management or Delegate | 10. Within 30 days of receipt of the chemical use review and justification reports, complete the review and justification sections according to the instructions provided by the Chemical Management POC.  |
|                                 | 11. Per 42 USC 13106, provide source reduction/recycling information for all chemicals included in the Toxic Chemical Release Inventory report.  |
|                                 | 12. Document any issues identified during inventories of chemical storage areas on a Problem Evaluation Request (PER) in accordance with TFC-ESHQ-Q_C-C-01.  |

**4.5 Final Disposition of Chemicals**  
(7.1.9, 7.1.10, 7.1.11, 7.1.12, 7.1.16, 7.1.18, 7.1.19, 7.1.21)

Final disposition includes consumption, re-distribution, recycling, and waste disposal.

This procedure does not cover waste management systems, such as waste accumulation areas and treatment, storage, and/or disposal facilities.

NOTE: To help maintain the accuracy of the chemical inventory, employees are encouraged to provide the barcode number of empty containers to the applicable facility ICG Contact or the chemical management POC.

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| All Employees | 1. If the contents of a barcoded container are fully consumed, manage the empty container in accordance with WRPS waste management procedures. |
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NOTE: As appropriate, steps 2 through 9 may be performed out of order.

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| ICG Contact or Delegate | 2. When a chemical no longer has an identifiable purpose: <ol style="list-style-type: none"> <li>a. Determine if the chemical is usable or non-usable. Examples of non-usable chemicals can include but are not limited to:           <ul style="list-style-type: none"> <li>• Past Expiration Date</li> <li>• Poor product condition</li> <li>• Damaged container (e.g., aerosol can that will not work)</li> <li>• Product contaminated with debris or other chemicals</li> <li>• Product is radioactively contaminated.</li> </ul> </li> </ol> |
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- b. Contact the Chemical Management POC for assistance as needed in determining usability.
- ICG Contact or Delegate 3. Initiate the disposition process based on chemical usability.
- a. If the chemical is no longer usable, leave barcode labels on the container and manage the chemical as waste in accordance with TO-100-052.
- b. If the chemical is usable, go to step 4.

NOTE: The Chemical Management POC can provide guidance on submitting an ad to the Mission Support Alliance (MSA) Property Excess Bulletin Board.

4. Ensure that the available material is posted on the MSA Property Excess Bulletin Board.
5. Notify the Chemical Management POC that the chemical is available for redistribution.

NOTE 1: Depending on hazards and whether there is a reliable demand for the product, not all chemicals will be accepted by the MSA Property Excess program.

NOTE 2: When determining suitability for Property Excess, include the time to process the request (i.e., obtaining all approvals, arranging transport and delivery to MSA), in determining whether the product meets the less than five year old product requirement.

6. Determine if the container(s) meets the following criteria to submit chemicals for Property Excess.
- The container(s) and label(s) are in good condition
  - Containers with expiry information are not expired or beyond any manufacturer stated shelf life
  - There is no indication the container(s) has/have ever been opened (e.g., any manufacturer seals are still intact)
  - Product is less than five years old when transferred to MSA
  - MSA Property Excess has confirmed the specific product will be accepted for Excessing.
7. Initiate the disposition process.
- a. If Property Excess criteria are met, go to step 9.
- b. If Property Excess criteria are not met, go to step 10.

NOTE: Chemical Management can assist in generating a listing of most container information using the CITS reporting function.

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| ICG Contact or Delegate | <p>8. Request Materials Control initiate the excess process in accordance with TFC-BSM-FPM_PR-C-01.</p> <p>a. For each product, you will need the following information as part of the material description:</p> <ul style="list-style-type: none"> <li>• Product name</li> <li>• Container barcode number (as applicable)</li> <li>• Hanford SDS/MSDS number</li> <li>• Expiration date (as applicable)</li> <li>• Size and type of container (e.g., can, metal, 1 gal; bottle, plastic 1 qt.; can aerosol, 425 gram)</li> <li>• Number of containers</li> <li>• Verification that the container(s) and label(s) are in good condition</li> <li>• Verification that the container(s) is/are unopened (e.g. any manufacturer seals still intact)</li> <li>• The date of acquisition showing the product is less than five years old.</li> </ul> |
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| Chemical Management POC or Delegate | <p>9. Note the chemical as available for redistribution in CITS by selecting “Yes” in the <i>Excess</i> field.</p> |
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| ICG Contact or Delegate | <p>10. If a barcoded chemical container is to be re-distributed from a TOC facility or a sub-contracted organization performing work for the TOC either on-site or off-site, remove or deface the tank farm specific chemical barcode at the time of transfer or pick-up.</p> |
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NOTE: If a number of different products are being dispositioned at the same time as either waste or for recycle, the appropriate WRPS Waste Services Point of Contact must be consulted for guidance on whether the products may be submitted on a single Tank Farm Container request. A list of the Points of Contact is posted on the WRPS Waste Services webpage (e.g., recycling, hazardous waste, mixed waste).

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| ICG Contact or Delegate | <p>11. If a chemical becomes degraded, expired, or a chemical declared as excess in CITS remains unclaimed and may have no identifiable purpose, submit a Tank Farm Container Request form (A-6002-935) in accordance with TO-</p> |
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100-052, and provide the following information as part of the waste description:

- Product name
- Product manufacturer
- WRPS Chemical container barcode number (as applicable)
- Hanford SDS/MSDS number (if present, use container barcode to identify the document appropriate to the age of the product)
- Expiration date (if listed on container or listed in CITS)
- Container type (e.g., aerosol can, plastic bottle) and size
- If there are any concerns or issues regarding container condition of the container including degraded or missing labels
- If the container size is greater than five gallons, estimate the quantity remaining (e.g.,  $\frac{3}{4}$ ,  $\frac{1}{2}$ , or  $\frac{1}{4}$  full).

12. Notify the Chemical Management POC when the chemical has been transported to a new owner, or picked up by Waste Operations.

a. Provide the disposition status from the list below:

- Transferred to another TOC organization (including TOC subcontractor)
- Transferred on-site to another Hanford contractor
- Excessed per TFC-BSM-FPM\_PR-C-01
- Recycled
- Waste (mixed, hazardous and non-regulated).

Chemical Management POC or Delegate

13. Update the chemical inventory in the CITS database when notified the material has been removed.

## 5.0 DEFINITIONS

Hazardous Material Storage Facility. A building, a portion of a building, or exterior area approved for the storage of hazardous materials in excess of exempt amounts as defined in NFPA 1, "Fire Code."

Layering. A condition where a liquid separates into two or more layers with a distinct boundary (e.g., oil and water).

## 6.0 RECORDS

The following records are generated during the performance of this procedure:

- Completed WRPS Chemical Inventory Worksheets (A-6006-240) are identified as a required sub-contract submittal and managed as part of the sub-contract documentation per TFC-BSM-IRM\_DC-C-07.
- Certified data supporting preparation of Hanford Site EPCRA Reports and submitted to MSA as part of a letter package:
  - Chemical inventory data
  - Data supporting TRI reporting determinations
  - Data certifications
  - Contractor certifications (as applicable).

Records will be maintained in the records section of IDMS. The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM\_DC-C-02.

Information added during the addition and update of the CITS database while performing such activities as receiving, storage, or inspection of reactive and time-sensitive chemicals are not record materials. This database can be used for general informational use reports for day-to-day operations.

Data generated during the inspection of reactive and time-sensitive chemicals is not record material. An informational copy of the inspection results will be kept in the CITS database.

## 7.0 SOURCES

### 7.1 Requirements

- 7.1.1 10 CFR 851, "Worker Safety and Health Program."
- 7.1.2 29 CFR 1910.106, "Flammable Liquids."
- 7.1.3 29 CFR 1910.119, "Process Safety Management of Highly Hazardous Chemicals."
- 7.1.4 29 CFR 1910.1200, "Hazard Communication."
- 7.1.5 40 CFR 68.130, "List of substances."
- 7.1.6 40 CFR 302.4, "Designation of Hazardous Substances."
- 7.1.7 40 CFR 355, "Emergency Planning and Notification."
- 7.1.8 40 CFR 370, "Hazardous Chemical Reporting Community Right-to-Know."
- 7.1.9 40 CFR 372, "Toxic Chemical Release Reporting Community Right-to-Know."

- 7.1.10 41 CFR 101-42, "Utilization and Disposal of Hazardous Materials and Certain Categories of Property."
- 7.1.11 42 USC 13101, "Findings and Policy."
- 7.1.12 42 USC 13106, "Source Reduction & Recycling Data Collection."
- 7.1.13 DOE-0223, "Emergency Plan Implementing Procedures," RLEP 3.27, "Hazard Surveys."
- 7.1.14 DOE O 151.1C, "Comprehensive Emergency Management System."
- 7.1.15 DOE O 420.1C, "Facility Safety."
- 7.1.16 DOE O 436.1, "Departmental Sustainability."
- 7.1.17 DOE/RL-94-02, "Hanford Emergency Management Plan."
- 7.1.18 MGT-ENG-IP-05, "ORP Fire Protection Program."
- 7.1.19 TFC-PLN-58, "Chemical Management Plan."
- 7.1.20 TFC-POL-16, "Integrated Safety Management System Policy."
- 7.1.21 TFC-POL-30, "Environmental Management Policy."

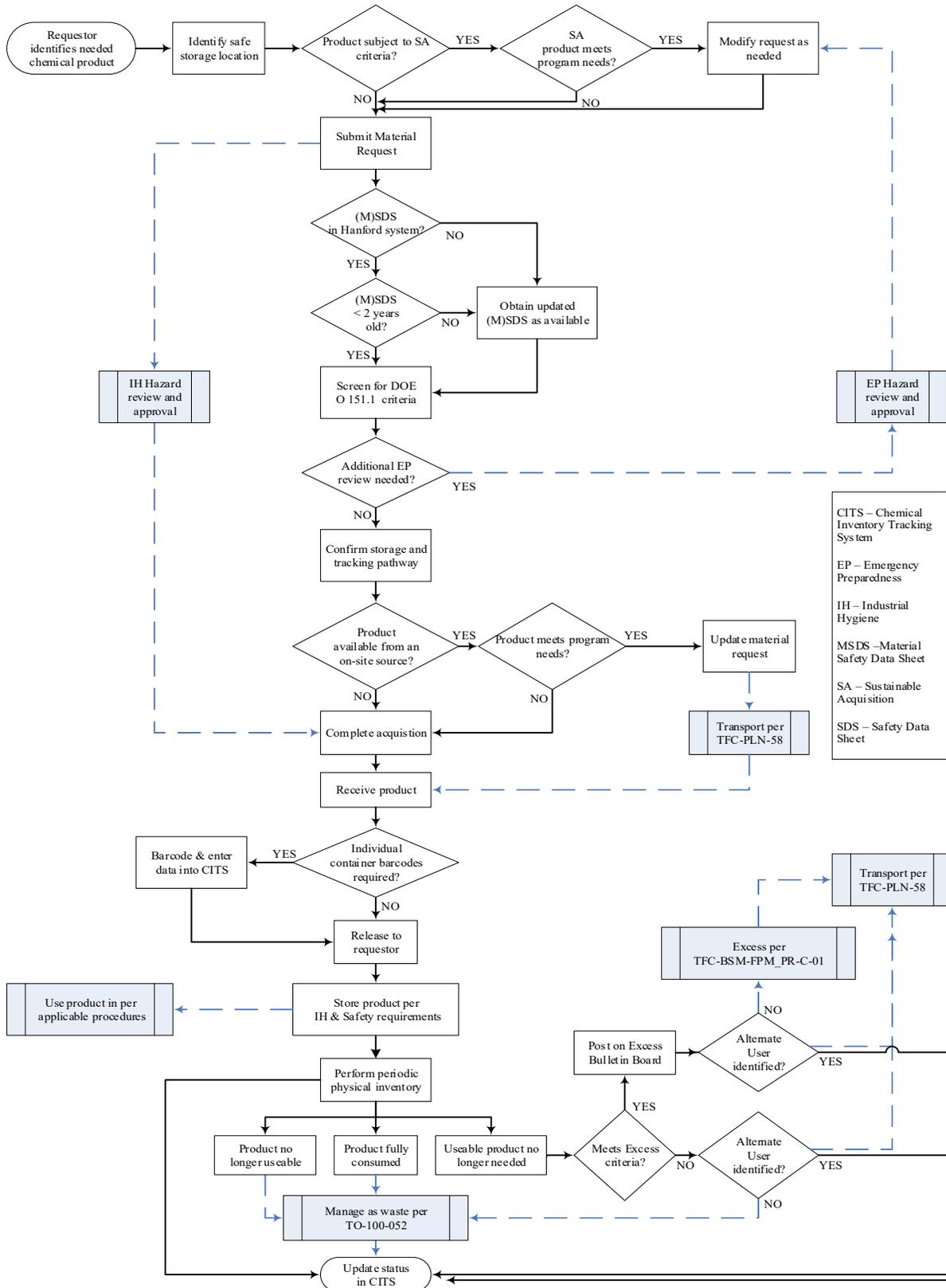
## **7.2 References**

- 7.2.1 ATTS-310, Section 4.5, "222-S Laboratory Complex Chemical Hygiene Plan."
- 7.2.2 ATTS-LO-150-062, "Management of Reactive and Time-Sensitive Chemicals in the Laboratory."
- 7.2.3 ATTS-LO-150-063, "Chemical Management for 222-S Laboratory Complex."
- 7.2.4 "Consolidated List of Lists Under EPCRA/CERCLA/CAA §112(r)," U.S. Environmental Protection Agency.
- 7.2.5 DOE-0360, "Hanford Site Confined Space Procedure."
- 7.2.6 NFPA 1, "Fire Code."
- 7.2.7 RPP-11192, "Tank Farms Chemical Compatibility Evaluation."
- 7.2.8 TF-AOP-011, "Response to Chemical and/or Radiological Events."
- 7.2.9 TFC-BSM-CP\_CPR-C-01, "Purchasing Card (P-Card)."
- 7.2.10 TFC-BSM-CP\_CPR-C-05, "Procurement of Materials and Services."
- 7.2.11 TFC-BSM-CP\_CPR-C-06, "Procurement of Materials."

<b>Chemical Management Process</b>	<b>Manual Document Page Issue Date</b>	<b>Operations TFC-OPS-WM-C-35, REV B-0 30 of 35 January 7, 2021</b>
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- 7.2.12 TFC-BSM-CP\_CPR-C-18, "Material Control."
- 7.2.13 TFC-BSM-FPM\_PR-C-01, "Property Management."
- 7.2.14 TFC-BSM-IRM\_DC-C-02, "Records Management."
- 7.2.15 TFC-BSM-IRM\_DC-C-07, "Vendor Processes."
- 7.2.16 TFC-ESHQ-FP-STD-03, "Flammable/Combustible Liquids."
- 7.2.17 TFC-ESHQ-FP-STD-13, "Fire Protection Requirements for Hazardous Material and Used Waste Absorbing Material Storage."
- 7.2.18 TFC-ESHQ-IH-C-02, "Hazard Communication."
- 7.2.19 TFC-ESHQ-IH-STD-11, "Carcinogen Control."
- 7.2.20 TFC-ESHQ-Q\_C-C-01, "Problem Evaluation Request."
- 7.2.21 TFC-ESHQ-S-STD-25, "Storing, Using, Handling, and Transporting Compressed and Liquefied Gases."
- 7.2.22 TFC-PLN-61, "Tank Operations Contractor Training and Qualification Plan."
- 7.2.23 TFC-PLN-125, "Sustainable Program Plan."
- 7.2.24 TO-100-052, "Perform Waste Generation, Segregation, Accumulation and Clean-up."

Figure 1. Chemical Management Process.



## ATTACHMENT A – CHEMICAL MANAGEMENT CRITERIA

This guide provides supplemental information in determining when chemicals are subject to management in accordance with TFC-PLN-58 and this procedure.

### I. Examples of chemicals that are managed by this procedure.

- Pest and weed control products
- Solvents, paints, chemicals, acids/bases, lubricants, and adhesives
- Industrial or commercial (i.e. non-consumer) packaged cleaning products
- All compressed gas cylinders and aerosol cans
- Ice melt products such as rock salt, Safe Step® or Meltdown™
- Construction materials such as concrete, asphalt, and abrasives
- Absorbent materials such as CleanSweep®, Waterworks SP-40, or Oil-Dri
- Products that release hazardous chemicals during normal use or foreseeable conditions including release of fume or dusts (e.g., metal stock, welding materials, treated wood, and lead/acid batteries).

### II. Examples of chemicals that are exempt from the processes in this procedure.

NOTE 1: Management may direct that SDS/MSDS for these articles be obtained from the manufacturer or distributor as available.

NOTE 2: These products may still be subject to requirements such as SA, flammable quantity limits and waste management requirements for empty or spent containers.

- Non-aerosol, non-pressurized personal use products such as:
  - Sun screen
  - Lens wipes
  - Cosmetics
  - Insect repellent
  - Medicines
  - First aid supplies
- Potable and non-potable water
- Non-aerosol, non-pressurized consumer packaged office supplies for use in an office setting. Examples include but may not be limited to:
  - Markers
  - Stamp pads
  - Adhesives
  - Printer and copier toners

**ATTACHMENT A – CHEMICAL MANAGEMENT CRITERIA (cont.)**

- Non-aerosol, non-pressurized consumer packaged cleaning supplies intended for use by non-janitorial staff in an office/lunchroom setting. Examples include but may not be limited to:
  - White board cleaner
  - Cleaning wipes
  - Dishwashing fluid
  - Air freshener.

Manufactured articles that will not release a hazardous chemical under normal or anticipated conditions of use such as circuit boards, light bulbs, lead shielding and sealed alkaline batteries

**III. Examples of chemicals that may or may not be exempt from the processes in this procedure.**

Certain categories of chemicals are exempt from some requirements addressed by this procedure but may be regulated by others. In accordance with DOE guidelines, these chemicals will be managed in accordance with the most conservative requirement. Determining factors can include specific hazard(s), constituents, quantity, storage location, and how the material is used. The Chemical Management POC will determine which requirements apply as part of the acquisition review. Some of these products include:

- Consumer packaged cleaning products used outside of an office/lunchroom setting such as all-purpose cleaners, sanitizers, dish soap and products used or maintained by janitorial staff.
- Consumer packaged office supplies used outside of an office/lunchroom setting such as specialty markers, adhesives, white board cleaner and hand sanitizer.
- Gasoline and/or diesel fuel.

**IV. Chemicals with higher than normal hazards.**

Some chemicals have higher than normal hazards. Additional controls and/or training may apply when acquiring, storing, handling or using these chemicals. Such chemicals can include:

- Carcinogens
- Highly volatile organic chemicals (e.g., methyl ethyl ketone or vinyl cement)
- Highly toxic chemicals (chemicals noted with a U.S. Department of Transportation (DOT) Poison label or a DOT Inhalation Hazard label)
- Highly corrosive chemicals (e.g., sodium hydroxide or muriatic acid)
- Reactive and shock sensitive chemicals (e.g., organic peroxide formers).

## ATTACHMENT B – CHEMICAL CATALOG ID REQUEST GUIDE

All chemicals acquired with an MR in EAM must have a Catalog Identification (CID). If the desired chemical does not have an appropriate CID, then a CID Request must be submitted. This guide is to assist the End User in providing the necessary information to accurately identify the needed chemical.

Field on Request Form	Guidance
Category	Chemicals/Lab Supplies
Description	<ul style="list-style-type: none"> <li>• Chemical Class Examples               <ul style="list-style-type: none"> <li>○ Chemicals/Lab Supplies: paint<sup>1</sup>, adhesive<sup>2</sup>, solvent, lubricant, fuel, sealant, foam insulation</li> <li>○ Gases: compressed gases</li> </ul> </li> <li>• Product name (including as applicable: brand name, grade, tint base, finish, color, etc.)</li> <li>• Concentration and/or purity grade (such as 70% isopropyl alcohol or UHP gas purity grade; pure chemicals are assumed to be 100% unless otherwise noted)</li> <li>• Physical state (as applicable – needed if product comes in more than one form such as products sold as both a pourable liquid and an aerosol or gases sold in both compressed and liquefied forms.)</li> <li>• Custom tint (as applicable)</li> <li>• Container size</li> <li>• Container material (when container comes in more than one type, such as glass or plastic)</li> </ul> <p>Examples            Paint, AK2-3, Amerlock 2/400 White Resin, 1 Gallon            Paint, Pure Performance interior latex eggshell, pastel base, tint: K9-180 Vinyl Cream, 1 Gallon            Paint, Krylon Industrial Quik-Mark Water-based inverted marking paint fluorescent orange, 17 oz aerosol            Adhesive, Armaflex 520 Adhesive, 1 QT            Paint, Daly's Wood Stain, interior/exterior 110 Golden Oak, 1 PT            Paint, Krylon Industrial Tough Coat flat white, 12 oz aerosol            Cement, Weld-On 724 CPVC, Heavy bodied, medium, gray, 1 QT            Nitrogen, compressed gas, Ultra High Purity (minimum purity 99.999%), cylinder size K (~220 CF), Batch Certificate of Analysis required            Nitrogen, refrigerated liquid, Industrial Grade (minimum purity 99.97%), Dewar size 5412 cubic feet            Solution, Buffer, pH, pH10.00, 4 Liter, plastic</p> <p><b>NOTE:</b> Do NOT include the Hanford SDS/MSDS number in the description. This number can change without notice. The chemical management review process uses the product specific information (manufacturer, manufacture part number and description details) to identify/verify the SDS/MSDS number and submit updates as appropriate.</p> <hr/> <p>1. Paint can include stains, finishes and epoxy coatings such as Amerlock            2. Adhesives can include glues, adhesive cements and epoxy cements such as JB Weld.</p>
Unit of Measure	Either EACH or same unit as container size listed in Description

## ATTACHMENT B – CHEMICAL CATALOG ID REQUEST GUIDE

Quality Level	QL-0 for nearly everything QL-3 only for items as directed by the project manager, SME or QA QL-1, QL-2, for safety class or safety significant items, contact QA for direction.
Procurement Quality Clauses	Only applicable for QL-1, QL-2 or QL-3. – As needed, consult QA to determine appropriate clauses. SCI/NRTL/Tagging requirements do not apply to chemicals.
Safety Class	Select GS for nearly everything – consult safety, QA &/or engineering if uncertain.
Storage Level	Use TFC-BSM-FPM_PR-C-24, Attachment G to determine needed storage level.
Shelf Life (If Applicable)	If available, a product data sheet may identify a minimum shelf life
Applicable Shelf life	If yes marked above, enter shelf-life as months.
Manufacturer (Not Supplier or Vendor name):	This will almost always be the same as the manufacturer listed on the Safety Data Sheet.
Manufacturer Part/Model # (Not Supplier or Vendor Part/Model #):	Chemicals should list a part number whenever possible (there are a few specialty chemical manufacturers who don't use part numbers to identify their products or the part number is integral to the product name) There are some products who use a number in the name such as Weld-On 724 Low VOC Cement which comes in both orange and gray. This is not the same as the part number which will also identify the container size such as 11890 (1 pt).  If the catalog is published by the manufacturer, the catalog entry is often the same as the part number. SDS and manufacturer Product Data Sheets may also list part numbers. Third party supplier/vendor catalog entries may or may not list a manufacturer part number as well as their own catalog ID.
Property Tagging	Chemicals are consumables and are "Group 1" property.
Required Approvals	This is for creation of the CID only and not the same as approvals on the MR. <ul style="list-style-type: none"> <li>• Select NO to both questions for QL-0 (applies to nearly all chemicals)</li> <li>• QL-1, QL-2, QL-3, per the Determination of Required Approvals (DRA).</li> </ul>
Additional Info	Examples include but are not limited to: <ul style="list-style-type: none"> <li>• Batch Certificate of Analysis Required</li> <li>• Preferred vendor and vendor part #, such as <i>Grainger, P/N IFCC4</i> (especially when no manufacturer part # can be found).</li> </ul>