

PROCEDURE 7 - Hazard Communication

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Synopsis

The purpose of this procedure is to educate all personnel about chemical hazards in the workplace. This procedure applies to all NWS facilities, work locations, and employees.

Initial Implementation Requirements:

- **Analyze Site Operations versus Procedure Requirements**
 - Identify Hazardous Chemicals on site. (*B.3.2, C.1*)
 - Inspect all labels on each container containing a hazardous chemical. (*B.3.4, C.4*)
- **Develop/Obtain Documentation/Information Required for Site**
 - Prepare a list of hazardous chemicals (*C.1*)
 - Develop site-specific Hazard Communication Program. (*7.3.3*)
 - Material Safety Data Sheets (MSDS) (*B.3.3, C.2.1*)
 - Procedures for control of chemical purchases. (*B.3.2, C.3*)
 - Training Lesson Plans. (*C.5, K*)
 - Procedure for updating chemical list. (*B.3.2, C.1*)
 - Procedure for contractor's compliance. (*C.10*)
- **Designate Person to Administer Hazard Communication Program Requirements**
- **Provide Local Training of Site Personnel**
 - MSDS (*C.5, K*)
 - Labeling of Hazardous Chemical Containers. (*K*)
 - Chemical Hazards in the workplace. (*C.5, K*)
 - Emergency Procedures (*C.5, K*)
 - Hazardous Materials Cleanup and Disposal. (*L*)
- **Inventory Material/Equipment (Procure as required)**
 - Container Labels. (*7.5.2b, B.3.4*)
 - Training Videos (*7.5.2b, K*)
 - Spill Cleanup Equipment. (*7.5.2b, L*)

Recurring and Annual Task Requirements:

- **Perform Inspections/Assessment/Testing**
 - Inspect labels on each container containing a hazardous chemical. (*B.3.4, C.4*)
- **Review/Update Documentation/Information required for Site**
 - Maintain a list of hazardous chemicals (*C.1*)
 - Update site-specific Hazard Communication Program. (*7.3.3*)
 - Material Safety Data Sheets (MSDS) (*B.3.3, C.2.1*)
 - Procedures for control of chemical purchases. (*B.3.2, C.3*)
 - Training Lesson Plans. (*C.5, K*)
 - Procedure for updating chemical list. (*B.3.2, C.1*)
 - Procedure for contractor's compliance. (*C.10*)
- **Provide Refresher Hazard Communication Training of Site Personnel (*C.5*)**
- **Inspect/Replace/Maintain Material/Equipment**
 - Container Labels. (*7.5.2b, B.3.4*)
 - Training Videos (*7.5.2b, K*)
 - Spill Cleanup Equipment. (*7.5.2b, L*)

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Hazard Communication Checklist

Requirements	Reference	YES	NO	N/A	Comments
Is initial and annual review of this procedure conducted and documented?	7.4.2				
Has a written Hazard Communication Program been developed?	7.3.3, C				
Has the Hazard Communication training been provided to all personnel?	K				
Have all affected employees read, understood and complied with the requirements of this procedure?	7.5.4a				
Has the list of hazardous chemicals been prepared and updated semi-annually?	B.3.2 C.1				
Are employees trained on hazards associated with chemicals present in the workplace and how they can protect themselves from these hazards?	K C.5				
Are all containers containing Hazardous Chemicals labeled, tagged, and include the identity and appropriate warnings of the hazardous chemical?	B.3.4 C.4				
Have facility personnel been trained on the use, interpretation and importance of labeling?	B.3.4 C.5				
Are employees trained in the use and interpretation of Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS)?	K C.5				
Are there complete and legible MSDS or SDS for all Hazardous chemicals at this facility?	B.3.3 C.2				
Are MSDS or SDS kept in a location(s) so that they are readily available to all personnel on all shifts?	B.3.3 C.2				

Requirements	Reference	YES	NO	N/A	Comments
Are employees trained on who to contact and what to do in an emergency?	B C.5				

7 HAZARD COMMUNICATION

7.1 Purpose and Scope

As part of its goal to provide a safe and healthful workplace, the National Weather Service (NWS) is promulgating this procedure to educate all personnel about chemical hazards in the workplace. This procedure applies to all NWS facilities, work locations, and employees.

7.2 Definitions

Field Office. A Field Office may include the following: Weather Forecast Office (WFO), River Forecast Center (RFC), Weather Service Office (WSO), and a Data Collection Office (DCO).

MSDS - Material Safety Data Sheet.

Operating Unit. For the purpose of this procedure, Operating Unit includes the National Centers for Environmental Prediction (NCEP), National Data Buoy Center (NDBC), NWS Training Center (NWSTC), National Reconditioning Center (NRC), Radar Operations Center (ROC), or the Sterling Field Support Center (SR&DC).

OSHA. Occupational Safety and Health Administration.

Station Manager. For the purpose of this procedure, the Station Manager shall be either the NWS Regional Director; Directors of Centers under NCEP (Aviation Weather Center, NP6; Storm Prediction Center, NP7; and Tropical Prediction Center, NP8; Space Water Prediction Center, NP9); Directors of the NDBC, NWSTC, and Chiefs of NRC, ROC and SFSC facilities; or Meteorologist in Charge (MIC), Hydrologist in Charge (HIC), or Official in Charge (OIC).

7.3 Procedure

7.3.1 The Station Manager shall ensure that the facility implements a comprehensive Hazard Communication Program which complies with the requirements of OSHA 29 CFR 1910.1200, "Hazard Communication" and Global Harmonization System (GHS) adopted by OSHA in 2012. The following OSHA web page contains comprehensive information on the new standard: <https://www.osha.gov/dsg/hazcom/index.html>.

Major changes to the Hazard Communication Standard

- **Hazard classification:** Provides specific criteria for classification of health and physical hazards, as well as classification of mixtures.
- **Labels:** Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.
- **Safety Data Sheets:** Will now have a specified 16-section format.
- **Information and training:** Employers are required to train workers by December 1, 2013 on the new labels elements and safety data sheets format to facilitate recognition and understanding.

7.3.2 Each facility shall develop a site-specific Hazard Communication Program using the template provided in Addendum I, Section C: “NWS Hazard Communication Program.” The Program will need to be updated to incorporate GHS requirements in accordance with implementation schedule provided in 7.3.3.

7.3.3 The Safety or Environmental/Safety Focal Point shall oversee the implementation and maintenance of the facility’s Hazard Communication Program.

NOTE: In 2012 OSHA has modified the Hazard Communication Standard (HCS) to conform to the United Nations Global Harmonization System (GHS). To assist with implementation of new OSHA requirements, the NOAA Safety and Environmental Compliance Office (SECO) has developed the online training course and associated quiz, posted on the following Google web site: <https://sites.google.com/a/noaa.gov/seco/>. The training is required for all NWS employees who have any, even minimal or sporadic, chemical handling as part of their jobs, and **must be completed by December 1, 2013**. NWS contractors are also encouraged to complete the course.

By June 1, 2015 the following activities shall be completed:

- Ensure that GHS compliant Safety Data Sheets (SDS) are in place.
- Identify and modify workplace warning signs in accordance with new GHS requirements.

The following table summarizes HCS GHS implementation timeline:

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	Employers
June 1, 2015 December 1, 2015	Compliance with all modified provisions of this final rule, except: The Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period to the effective completion dates noted above	May comply with either 29 CFR 1910.1200 (the final standard), or the current standard, or both	Chemical manufacturers, importers, distributors, and employers

7.4 Responsibilities

7.4.1 Regional or Operating Unit Environmental/Safety Coordinators

- a. Will monitor and promote compliance with the requirements of this procedure at field offices or Operating Unit facilities.
- b. Will ensure that applicable procedures are implemented at regional headquarters or Operating Unit facilities.

7.4.2 Station Manager

- a. Will have oversight over the implementation of this procedure, and ensure that the requirements of this procedure are followed by individuals at the NWS facility.
- b. Will ensure that initial and periodic inventory of container labels, spill cleanup and other safety equipment is accomplished and adequate stock is maintained.
- c. Will ensure that facility's Hazard Communication Plan is updated to address GHS elements and all applicable requirements are implemented in accordance with the implementation schedule described in 7.3.3.
- d. Will review or delegate review, of this procedure on an annual basis to ensure that the facility is complying with its requirements. Confirmation of this review shall be forwarded to the Regional or Operating Unit Environmental/Safety Coordinator.

7.4.3 NWS Headquarters (NWSH)

- a. The NWS Safety Office will provide assistance to Regional Headquarters, Operating Units, and field personnel to ensure that NWS facilities comply with requirements of this procedure.
- b. NWSH will coordinate with NOAA SECO, as necessary, regarding compliance issues related to this procedure.

7.4.4 Safety or Environmental/Safety Focal Point

- a. Will ensure that any responsibilities delegated to them by the Station Manager are implemented in accordance with the requirements of this procedure.
- b. Will oversee the implementation and maintenance of the facility's Hazard Communication Program.

7.4.5 Employees

Employees affected by this procedure are required to read, understand and comply with the requirements of this procedure and report unsafe or unhealthful conditions and practices to their supervisor or safety focal point.

NOTE: Reference NWS PD 50-11 for complete list of responsibilities
<http://www.nws.noaa.gov/directives/050/pd05011a.pdf>

7.5 References

Incorporated References. The following list of references is incorporated as a whole or in part into this procedure. These references can provide additional explanation or guidance for the implementation of this procedure.

U.S. Department of Labor, Occupational Safety and Health Administration, 29 CFR 1910.1200, "Hazard Communication."

7.6 Addenda

Addendum I: Hazard Communication Program Compliance Kit

ADDENDUM I

HAZARD COMMUNICATION PROGRAM KIT

SECTION A

Executive Summary

A standardized NWS Hazard Communication Program template is found in Section C. It meets the *minimum* OSHA requirements and covers newly adopted Global Harmonization System (GHS) requirements.

Major changes to the Hazard Communication Standard

- **Hazard classification:** Provides specific criteria for classification of health and physical hazards, as well as classification of mixtures.
- **Labels:** Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.
- **Safety Data Sheets:** Will have a specified 16-section format.
- **Information and training:** Employers are required to train workers by December 1, 2013 on the new labels elements and safety data sheets format to facilitate recognition and understanding.

Implementation Timeline

- **Chemical users:** Continue to update safety data sheets when new ones become available, provide training on the new label elements and update hazard communication programs if new hazards are identified.
- **Chemical Producers:** Review hazard information for all chemicals produced or imported, classify chemicals according to the new classification criteria, and update labels and safety data sheets.

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and SDS format.	Employers
June 1, 2015*	Comply with all modified provisions of this final rule, except:	Chemical manufacturers, importers, distributors and employers
December 1, 2015	Distributors may ship products labeled by manufacturers under the old system until December 1, 2015.	
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers

Transition Period	Comply with either 29 CFR 1910.1200 (this final standard), or the current standard, or both.	All chemical manufacturers, importers, distributors and employers
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The Station Manager or his/her designee (e.g., Safety or Environmental/Safety Focal Point) shall review the Hazard Communication Program template presented in Section C and fill in the blanks to include unique information about each work site. The written program shall be available for employees to review. The program consists of the following sections:

Section	Description
A	Executive Summary
B	Compliance Guidance
C	NWS Hazard Communication Program (template)
D	Worksite Hazardous Chemical List
E	Labeling Information
F	Worksite Training Records
H	NWS Hazardous Chemical List Requirements
G	Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) Requirements.
H	NWS Material Safety Data Sheet/Safety Data Sheet Requests.
	(1) Sample letter for requesting a MSDS (SDS).
	(2) Sample letter for requesting additional information about a MSDS (SDS), and
	(3) MSDS (SDS) Request File sheet
J	Training Program.
K	Cleanup and Disposal of Typical Hazardous Materials and Wastes.

SECTION B

Compliance Guidance

B.1 Introduction. About thirty two-million workers in the United States are potentially exposed to one or more chemical hazards. This poses a serious problem for exposed workers and their employers. Chemical exposure may cause or contribute to many serious health effects such as heart ailments, kidney and lung damage, sterility, cancer, burns, and rashes. Some chemicals may also be safety hazards and have the potential to cause fires and explosions and other serious accidents.

Because of the seriousness of these safety and health problems, and because many employers and employees know little or nothing about them, in 1983 the Occupational Safety and Health Administration (OSHA) issued a standard called **Hazard Communication** that applies to employers in the manufacturing sector of industry. The scope of the standard was expanded in 1987 to include employers in the non-manufacturing sector and Federal Government. The finalized standard was promulgated on August 24, 1987, and amended in March 1997. Further explanations are found in the Federal Register 52 (163): 31852-31886, August 24, 1987. In 2012, OSHA has modified the Hazard Communication Standard (HCS) to adopt Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. Information regarding the GHS can be found at the following web sites:

- <https://www.osha.gov/dsg/hazcom/HCSFactsheet.html>
- <https://www.osha.gov/dsg/hazcom/>
-

The basic goal of the standard is to ensure that supervisors and employees know about chemical hazards and know how to protect themselves. This knowledge, in turn, should help to reduce the incidence of chemical source illnesses and injuries.

B.2 What the Standard Requires. The Hazard Communication Standard establishes uniform requirements to assure that the hazards of all chemicals imported, produced or used in U.S. workplaces are evaluated for physical and health hazards, and that the resultant hazard information and associated protective measures are transmitted to supervisors and potentially exposed employees by means of labels on containers and material safety data sheets (MSDS). Under new GHS HCS, MSDS will be called Safety Data Sheets (SDS).

This Hazard Communication Program ensures that all National Weather Service (NWS) supervisors receive the information they need to inform and train their employees properly and to assure that employee protection programs are in place. It also provides necessary hazard information to the staff, so they can participate in, and support, the protective measures at their workplaces.

B.3 How to Comply with the Standard. The NWS Station Manager shall ensure that the field office complies with the HCS and that a site-specific hazard communication program is developed. The Station Manager shall designate personnel who shall be responsible for development and maintenance of the program. See paragraph B.3.5 for more details. The following is a process to be used by the Safety or Environmental/Safety Focal Point in developing a Hazard Communication Program unique to their office.

B.3.1 Read the Standard. Review the standard and ensure that the provisions of the Standard are understood. NOAA SECO online training is available to explain provisions of the new GHS standard (<https://sites.google.com/a/noaa.gov/seco/>) Side-by-Side Comparison of OSHA's Existing Hazard Communication Standard (HCS 1994) vs. the Revised Hazard Communication Standard (HCS 2012) can be found at: <https://www.osha.gov/dsg/hazcom/side-by-side.html>.

B.3.2 List the Hazardous Chemicals in the Workplace.

- Walk around the workplace, read the labels of all the containers, and list the identity of materials that may be hazardous; the manufacturer's product name, manufacturer, quantity on hand, location where product is stored, and the work area where the product is used (see table in Section D). Be sure to include hazardous chemicals that are generated in the work operation but are not in a container (e.g., welding fumes, soldering fumes, etc.) and compressed gases.
- Ensure that chemical products purchased through the Consolidated Logistics System (CLS) which are classified as hazardous are listed.
- Review the chemical hazards list and determine whether any substances are exempt [see paragraph (b) of the referenced standard for exemptions], e.g., pesticides, food additives, cosmetics.
- Establish a file on hazardous chemical products used in the workplace, and include copies of the latest MSDSs (SDSs), and any other pertinent information.
- Develop procedures to keep the list current. . When new products are used or purchased, add them to the list. Establish purchasing procedures. See Section C, paragraph C.3, for details.

B.3.3 Obtain MSDS (SDS) for All Chemical Substances.

- If there is no MSDS (SDS) for a hazardous substance in the workplace, request a copy from the chemical manufacturer, distributor or importer as soon as possible (See Section I for a sample letter requesting an MSDS (SDS)). In addition, the Internet can be used to obtain missing MSDS (SDS). An MSDS (SDS) shall accompany or precede the shipment from a distributor or the National Logistics Support Center (NLSC) and shall be used to obtain identifying information such as the chemical name and the hazards of a particular substance.
- Review each MSDS (SDS) to be sure that it is complete, legible, and clearly written. The MSDS (SDS) shall contain information required by OSHA HCS including but not limited to the physical and chemical properties of a substance, as

well as the physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first-aid procedures, and control measures.

- If the MSDS (SDS) is incomplete or unclear, contact the manufacturer or importer to get clarification on the missing information.
- If the MSDS (SDS) contains trade secret information, make sure that an emergency number is included.
- Make sure the MSDS (SDS) is available to facility staff, volunteer observers, and contractors.
- Upon request, allow a representative of the Assistant Secretary for Occupational Safety and Health (OSHA inspector) to see MSDS (SDS) files.

B.3.4 Make Sure That All Containers Are Labeled. The manufacturers, importers or distributors are responsible for labeling containers, but both the supervisors and facility staff shall adhere to the following:

- Ensure that all containers of hazardous substances in the workplace are labeled, tagged or marked and include the identity of the hazardous chemical, and the appropriate hazard warnings. Container labels for purchased chemicals shall also include the name and address of the chemical manufacturer, importer, or other responsible party.
- Check all incoming shipments of hazardous chemicals to be sure that they are labeled.
- If a container is not labeled, obtain a label or the label information from the **manufacturer, importer, or other responsible party** or prepare a label using information obtained from these sources. Do not try to “guess” if you are not sure what is in the container.
- Do not remove or deface existing labels on containers unless the container is immediately marked with the required information.
- Remove all old labels before using a container for other products.
- Instruct facility staff on the importance of labeling portable receptacles into which they have poured hazardous substances. If the portable container is for their immediate use, the container does not have to be labeled; however, such a container shall be emptied after the employees leave the area.

<p>NOTE: Per OSHA HCS, labels on existing chemical products will not have to be updated unless chemical manufacturers, importers, distributors or employers become aware of any significant information regarding the hazards of the</p>

chemical. In this case, the labels will have to be revised within six months of becoming aware of the new information.

B.3.5 Develop and Implement a Written Hazard Communication Program. This program shall include:

- MSDSs (SDSs);
- Container labeling and other forms of warnings;
- Employee training based upon the hazardous chemicals list, MSDSs (SDSs), and labeling information; and
- Methods for communicating hazards and protective measures to facility staff and others.

Subsequent sections of this kit will discuss each of these steps in more detail and provide samples of the material discussed and lists of products, services, and other resources. See Section C, for the general template of the standardized NWS Hazard Communication Program. Review it, fill in the blanks and add any information specific to the site. In order to implement the Program, the Station Manager and other site supervisors shall be actively involved in the process.

If you need further assistance with program development and training, contact the NWS Regional/Operating Unit Environmental/Safety Coordinator or the NWS Safety Officer.

B.4 Checklist. The following checklist can assist Station Manager in their evaluation of the Hazard Communication Program.

- Yes ___ No ___ Reviewed hazardous chemicals at the worksite.
- Yes ___ No ___ Established a master hazardous chemical list.
- Yes ___ No ___ Obtained MSDS (SDS) for each hazardous chemical in use.
- Yes ___ No ___ Developed and implemented procedures to ensure that all incoming hazardous chemicals are labeled.
- Yes ___ No ___ Reviewed each MSDS (SDS) for completeness.
- Yes ___ No ___ Ensured MSDS (SDS) are readily available, where necessary.
- Yes ___ No ___ Prepared a written Hazard Communication Program.
- Yes ___ No ___ Developed and implemented processes to communicate hazards to facility personnel.
- Yes ___ No ___ Informed facility staff of protective measures for hazardous chemicals used in the workplace.
- Yes ___ No ___ Alerted facility staff to other forms of warning that may be used.

NOTE: In order to aid in the management of this procedure, only the minimum and essential hazardous materials and products should be purchased and stored.

SECTION C

National Weather Service Hazard Communication Program

The following written Hazard Communication Program has been established for:

National Weather Service Office: _____
Region: _____
Address: _____

It is prepared to comply with the U.S. Department of Labor, Occupational Safety and Health and Administration Standard Title 29 Code of Federal Regulations (CFR) Part 1910 Section 1200, Hazard Communication standard requirements.

The Station Manager at this site:

_____ is responsible for the occupational safety and health of the personnel and the Hazard Communication program at the site. Functional responsibility for the Hazard Communication Program has been delegated to:

_____ (Safety or Environmental/Safety Focal Point) name
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The Safety or Environmental/Safety Focal Point shall review and update the program on a semiannual basis. This program applies to all worksites associated with (circle one):

- a. Weather Forecast Office (WFO)
- b. Weather Forecast Office/River Forecast Center (WFO/RFC)
- c. Weather Service Office
- d. Data Collection Center
- e. Operating Unit (e.g., NCEP, NDBC, etc.)
- f. Other

NWS employees, their designated representatives, and contractors at this facility and upon request, the Occupational Safety and Health Administration (OSHA) representatives, and emergency and medical service providers have access to this written Hazard Communication Program at the following location: _____

The worksites listed on this page are sites where NWS personnel may be exposed to the chemical hazards under normal working conditions or during an emergency situation.

Locations			
Site Location:		State:	
List of the offices, WSR-88D Radar Data Acquisition (RDAs) sites, Upper Air Inflation Buildings (UAIBs), Automated Surface Observing System (ASOS) sites, National Oceanic and Atmospheric Administration (NOAA) Weather Radio, cooperative stations, transition power maintenance shelters, storage sites, etc., associated with this Weather Forecast Office (WFO) or WFO/River Forecast Center (RFC) or Operating Unit.			
Type of Facility/Description		Location	

C.1. Hazardous Chemical List. The Station Manager has the primary responsibility to ensure that a list of hazardous chemicals used at the field office or Operating Unit and associated sites is prepared and kept current. The Safety or Environmental/Safety Focal Point or Station Manager’s designee _____ shall develop and update the master hazardous chemical list semiannually. A new item shall be added on the master chemical list after the Safety or Environmental/Safety Focal Point has reviewed the Material Safety Data sheet (MSDS) or Safety Data Sheets (under revised OSHA Hazard Communication Standard) and cleared it for purchase (see paragraph C.3 for purchasing requirements). Only the Safety or Environmental/Safety Focal Point or the Station Manager’s designated representative can update the master hazardous chemical list. Personnel in charge of associated sites are responsible for updating the site hazardous chemical list in accordance with the master list.

Section D contains a master list of all known chemical products and items containing chemicals to which employees at this site are or may be potentially exposed (e.g., via spills). Separate lists are available for RDAs, UAIBs, ASOS, NOAA Weather Radio, cooperative stations, etc. and are posted and accessible to fire department or other emergency response organization(s) personnel during emergency situations. (Local municipal fire officials may request specific arrangements for displaying the lists outside the building(s)).

The Worksite Hazardous Chemical List includes the following:

- a. product/generic name, as shown on the label and MSDS (names shall be identical);
- b. manufacturer's or distributor's address, and, if available, telephone number;
- c. generic name;
- d. operational area used;
- e. quantity on hand;
- f. date entered into the system;
- g. National Stock Number (NSN)/Agency Stock Number (ASN), if applicable; and
- h. location where used or stored.

It is recommended to have list organized alphabetically, by product name and/or by manufacturer.

C.2. Material Safety Data Sheets (MSDSs) or Safety Data Sheets (SDSs). MSDS (SDS) provide specific information on the chemical product. During phase-in period, field offices or Operating Units would be required to comply with either OSHA HCS of 1994 or revised HCS of 2012, or both. This means that there will be a time when both, MSDS and SDS will be present. For compliance purposes, there is no requirement to maintain two sets.

The Safety or Environmental/Safety Focal Point or another designated employee is responsible for compiling and maintaining a complete master set of MSDSs (SDSs) for chemical products identified on the worksite hazardous chemical list (see Section D).

For products already in use at NWS facilities for which there are no current MSDS (SDS), the Safety and Environmental/Safety Focal Point shall ensure that a corresponding MSDS (SDS) is obtained from the manufacturer or vendor.

If a product is ordered through the Consolidated Logistics System (CLS), the shipment shall automatically include MSDS (SDS). If the MSDS (SDS) is not included with a shipment, the ordering employee shall contact the National Logistics Support Center (NLSC) and request the corresponding MSDS (SDS). All purchase requisitions for new chemical products shall be reviewed and cleared by the Safety or Environmental/Safety Focal Point or another designated person, as described in paragraph C.3.

The Safety or Environmental/Safety Focal Point shall contact a manufacturer or vendor if within a reasonable time, an MSDS (SDS) has not been received, or additional clarification and research is necessary. It is advisable to contact the manufacturer's MSDS (SDS) Technical Service Department first by telephone. When this approach is not successful, the Safety or Environmental/Safety Focal Point shall contact the manufacturer by letter (see Section I for sample letters requesting MSDS (SDS) or additional information). A copy of the letter shall be retained to document efforts to obtain the MSDS (SDS).

The Safety or Environmental/Safety Focal Point shall ensure that MSDS (SDS) containing trade secret chemical components includes the manufacturer's emergency number. The manufacturer shall disclose the identity of a trade secret component in case of medical emergency to a treating physician. If the product with a trade secret component requires monitoring or other special

protective measures, industrial hygiene professionals have a right to require the identity of trade secret components. The Safety or Environmental/Safety Focal Point shall contact the NOAA SECO safety personnel, or the NWS Regional/Operating Unit Environmental/Safety Coordinator for technical advice in such cases.

C.2.1 MSDS (SDS) Sets to Maintain. A master MSDS (SDS) set shall be maintained at the field office or Operating Unit as part of the Hazard Communication Program. Maintenance of MSDS (SDS) sets at all collocated sites is recommended. Uniquely defined MSDS (SDS) subsets shall be available at all remote locations and maintained by the Safety or Environmental/Safety Focal Point or other personnel designated by the Station Manager for the following sites:

- RDA,
- UAIB and/or balloon inflation launching shelter (BILS),
- ASOS
- NOAA Weather Radio
- Cooperative Stations (if chemical products are used)
- Transition power maintenance shelter (TPMS),
- Storage sites, and
- Other sites associated with the facility: _____

In addition, supervisors shall ensure that applicable MSDS (SDS) are available within individual work areas under their control.

Copies of MSDS (SDS) can be obtained from the Safety or Environmental/Safety Focal Point.

C.3 Purchasing Requirements. Purchase orders for products that are hazardous or may contain hazardous chemicals/materials shall include a provision, or be accompanied by a written request, to the vendor or supplier that:

- a. An up-to-date MSDS (SDS) is provided,
- b. Containers bear required identification and warning labels (see paragraph C.4 for labeling requirements), and
- c. Department of Transportation (DOT) requirements for shipment are met.

Prior to the acquisition of new chemical products, the MSDS (SDS) for those products shall be obtained and forwarded to the Safety or Environmental/Safety Focal Point for review in order to determine if the potential for physical and health hazards exists, and if there are any special requirements for shipment, disposal, and storage. If working with the product would present more than a minor health hazard and require special preventive measures (local exhaust, air monitoring), the usage of such a product shall be discouraged. The product shall be replaced by less hazardous alternatives, if available. NWS employees are mandated to actively search for viable replacement for hazardous products so as to replace them with environmentally 'friendly' products that are less hazardous to human health and the environment. Product cost estimates shall include all expenditures for operating and disposing of that product. This includes the costs

for the initial purchase of the product as well as the use of personal protective equipment and the proper disposal of a used product or residue.

While MSDS (SDS) are not required to be physically attached to a shipment, they should accompany or precede the shipment. When the manufacturer/supplier fails to send an MSDS (SDS) with a shipment, the Safety or Environmental/Safety Focal Point or his/her designee shall obtain one from the manufacturer/supplier.

When purchasing hazardous materials from the foreign companies, NWS personnel shall ensure the following:

- a. Import of hazardous material(s) into the U.S. is not prohibited by any U.S. agency and/or regulations.
- b. Shipment of hazardous material(s) into U.S. is performed in accordance with applicable U.S. DOT regulations.

C.4. Container Labeling and the Use of Placards. Chemical manufacturers, importers, and distributors are mandated by law to label, tag, or mark all containers leaving their plants or warehouses. Unlike the MSDS (SDS), the label is not an exhaustive description of the chemical substance. Rather, the label is meant to warn users of health and/or chemical hazards. During the phase in period for revised OSHA HCS conforming to Global Harmonization System requirements, worksites may have current HCS labels or the revised ones, or both. Under HCS of 1994, labels shall list:

- a. Name of the chemical and common names, if any;
- b. Signal word for hazard; CAUTION, DANGER, WARNING, etc., and hazard statement (see Section F for examples); and
- c. The name and address of the manufacturer, importer, distributor, or responsible party.

Under revised HCS of 2012, labels require to have the following information:

- a. Product identifier;
- b. Signal word;
- c. Hazard statement;
- d. Pictogram(s);
- e. Pre-cautionary statement; and
- f. The name and address of the manufacturer, importer, distributor, or responsible party.

In most cases, chemical products purchased in retail stores have the required labeling. Products purchased in bulk from wholesale distributors or supply houses are more likely to have labeling problems and, therefore, shall be thoroughly checked.

Personnel who purchase or receive shipments shall verify that each container's label contains all required information. The following additional requirements shall be met:

- a. the chemical name shall be identical with the one listed on the MSDS (SDS). For items ordered through CLS, there shall be a national stock number (NSN) and agency stock number (ASN) on the label;
- b. labels shall be legible and in English;
- c. labels shall not be defaced or otherwise damaged; and
- d. container labeling shall be in conformance with hazardous material transportation regulations promulgated by Department of Transportation (DOT) and set forth in Title 49 CFR. DOT requires proper shipping name, UN ID #, and hazard labels on shipping container.

If any problems are discovered, shipments shall not be accepted, and the Safety or Environmental/Safety Focal Point shall be notified. If the problem cannot be resolved locally, the NWS Regional/Operating Unit Environmental/Safety Coordinator shall be contacted for advice regarding further action.

Station managers and supervisors are responsible for ensuring that personnel use only labeled/marked containers. To comply with this requirement, existing unlabeled containers shall be labeled (if the content is known) and any new purchase or shipment shall be checked before the product is used.

To further ensure that employees are aware of the chemical hazards of materials used in their work areas, supervisors for each work area and/or shift shall ensure that all secondary containers are labeled. Any container label that becomes damaged shall be replaced. This label may be replaced with either an extra copy of the original manufacturer's label, or with generic label alternatives that meet the requirements of the revised HCS (e.g., NFPA labels are permitted, however, information on these labels must be consistent with the revised HCS – no conflicting warnings or pictograms). When transferring chemicals from one container to another (e.g., transfer of a solvent from a 5-gallon container into a 1-gallon can), the person responsible for the transfer is also responsible for the proper labeling of the new container.

Labels may not be required on temporary **portable containers** in which chemicals are:

- a. transferred from labeled containers,
- b. when such a container is intended for the transferring employee's immediate use,
- c. the quantity does not exceed a one day supply, and
- d. the container is used only when an employee is present.

If all of these conditions are not satisfied, the container shall be labeled. Care shall be taken by an employee and supervisor to assure that chemicals are not disposed into temporary containers that previously held incompatible chemicals, unless the containers are properly cleaned.

<p>NOTE: No flammable material may be placed into temporary containers not designated for flammables.</p>
--

Placards or signs which convey the hazard information may be posted in lieu of container labels for stationary containers within a work area which have similar content and hazards, e.g., hydrogen for generators and hydrogen storage area.

The Safety or Environmental/Safety Focal Point or another person designated by the Station Manager should inspect container labeling at least semiannually in conjunction with the hazardous list and MSDS (SDS) update. Any unlabeled containers of unknown content and surplus chemical products shall be disposed of by a certified disposal company. There are a number of Federal and state regulations that govern the handling, transport, storage, and disposal of hazardous chemicals. Any surplus activity shall be planned ahead including accumulation, storage, and disposal of surplus chemicals. If necessary, assistance can be requested from the NWS Environmental and Safety Coordinator.

Pesticides, foods, food additives, colorings, drugs, and consumer products that are controlled by other federal agencies and laws do not require labeling under the OSHA Hazard Communication Standard.

C.5. Employee Training and Information. NWS personnel who (even occasionally) work with, purchase, or are potentially exposed to chemicals shall receive initial training on the Hazard Communication Program.

The Station Manager, along with the Safety or Environmental/Safety Focal Point shall determine which station or operating unit personnel have not yet received Hazard Communication training and need to be trained. Information on training can be found in Section J, Training Program. The Safety or Environmental/Safety Focal Point will facilitate and coordinate NWS office personnel HAZCOM training. The training program shall include the following topics:

- a. an overview of the requirements contained in OSHA standard 29 CFR 1910.1200;
- b. chemical and physical properties (flashpoint, reactivity, etc.) of hazardous materials and associated physical hazards (explosive, flammable, etc.);
- c. health hazards, including signs and symptoms of exposure and routes of entry;
- d. how to interpret labels and MSDS (SDS);
- e. methods and observation techniques used to determine the presence or release of hazardous chemicals in the work area (such as monitoring, visual appearance, or odor, etc.);
- f. how to lessen or prevent exposure to the hazardous chemicals through usage of safe work practices, engineering controls (ventilation), and personal protective equipment;
- g. chemicals present in the work area;
- h. location and availability of the written Hazard Communication Program, hazardous chemical lists, and MSDSs (SDSs);
- i. emergency procedures to follow if an employee is exposed to these chemicals; and
- j. spill cleanup and disposal of typical NWS hazardous materials and wastes.

Each new employee who has not been trained shall receive the initial training. Upon completion of the initial training, each employee shall sign the training form (see Section G) or a form approved by the Station Manager.

When new chemicals or chemical products are introduced into the work area, the Safety and Environmental/Safety Focal Point or another designated employee shall:

- a. review the MSDS (SDS) associated with the chemical products,
- b. identify potential hazards and determine hazard control requirements, if applicable, and
- c. ensure that all employees working with or exposed to the hazardous chemicals are properly trained in their use.

Additional training of NWS personnel shall be done whenever a new hazard is introduced into a workplace. Refresher training shall take place based upon an evaluation by the Station Manager along with the Safety or Environmental/Safety Focal Point. The need for refresher training shall be based on the employee's demonstration that he/she has less than a thorough understanding of the Hazard Communication Program or based on personnel turnover. Online training course that covers revised OSHA HCS standard is available on the following secure NOAA SECO web site: <https://sites.google.com/a/noaa.gov/seco/>.

C.6. Hazardous Non-Routine Tasks. Infrequently, NWS employees are required to perform hazardous non-routine tasks. Prior to starting work on such projects, affected employees shall be given information by their supervisor and the Safety or Environmental/Safety Focal Point about the hazards to which they may be exposed during such activity. If more technical advice is required, the NWS Regional/Operating Unit Environmental/Safety Coordinator or NWSH safety personnel should be contacted.

The information shall include:

- MSDS (SDS) and description of other physical and health hazards,
- Personal protective equipment and safety measures the employee shall use,
- Measures that the Station Manager or his designee has taken to lessen the hazards associated with non-routine task, including area ventilation, assignment of a second person or safety observer, spill emergency procedures, etc.

C.7. Chemicals in Unlabeled Pipes. Work activities are often performed by employees in areas where chemicals are transferred through unlabeled pipes. Pipes are not required to be labeled; however, employees shall be informed of their content. The field office or Operating Unit may have the following unlabeled pipes: potable water, sewer, oil piping, air conditioning, equipment piping (e.g., air conditioning piping contains Freon that is asphyxiant; maintenance on such piping shall be done only by certified mechanics with specialized recovery equipment).

Prior to starting work in these areas, employees shall contact the responsible supervisor for information regarding:

- the chemical(s) in the pipes,
- potential health hazards, and
- safety precautions which shall be taken.

C.8. Station Manager Responsibilities. The Station Manager, with assistance of the site Safety or Environmental/Safety Focal Point, shall ensure that each employee has a basic knowledge of

the information contained in MSDS (SDS) and an understanding of proper use of that information. The Station Manager shall ensure:

- MSDSs (SDSs) are available to employees in their work areas during each work shift, and
- MSDS (SDS) information is provided for each hazardous chemical.

C.9. Employee Responsibilities. Successful implementation of the Hazard Communication Program depends on active involvement of personnel at the field office or Operating Unit. Every NWS employee who purchases, handles, or uses hazardous chemical products is responsible:

- a. To know where to get information about the hazardous chemical labels used in the work area;
- b. To read and understand the information on hazardous chemical labels and MSDS (SDS);
- c. To keep the work areas clean;
- d. To use protective clothing and equipment, as required;
- e. Not to smoke, eat, or drink around hazardous chemicals;
- f. To learn the emergency procedures for the work area;
- g. To follow the procedures for hazardous chemical disposal and spill cleanup;
- h. To practice safe work habits; and
- i. To attend required training.

C.10. On site Contractors. When soliciting a contract, it is the Contracting Officer's Technical Representative (COTR) responsibility to inform the Contracting Officer of any possible hazards associated with work on a contract, so that notification and special conditions can be put into the solicitation prior to contract award. The site Safety or Environmental/Safety Focal Point shall advise the COTR of possible hazards that contractor employees encounter while working at an NWS facility. Contractors working at the field office or Operating Unit shall comply with the state of _____ occupational safety and health regulations.

(Enter NA if state does not have an OSHA approved plan)

Note: Federal employees on the federal property are not governed by state OSHA.

The Contracting Officer shall obtain from a contractor a list of all chemicals the contractor intends to bring into or on to the work area (interior/exterior paint, sealants, tile or carpet adhesives, cleaning supplies, fertilizers, etc.). This includes construction as well as janitorial and landscaping contracts. A copy of the MSDS(s) (SDS) shall be provided to the COTR and the Safety or Environmental/Safety Focal Point. MSDS(s) (SDS) shall be posted in the work area, so that all employees affected by the contract work can have an access to them. If any engineering controls (ventilation, etc.) are required, the contractor shall describe the method(s) that shall be used to implement these controls and a work schedule for the implementation. This information should be posted or otherwise communicated to affected personnel.

Upon notification by the COTR, the Safety or Environmental/Safety Focal Point shall advise outside contractor employees of any hazards that they may encounter at NWS facilities. Contractor employees shall be informed about the location of this Hazard Communication

Program and the availability of MSDS(s) (SDS). The information provided by the Government shall be sufficient to enable the contractor to satisfy his own Hazard Communication Program responsibilities as promulgated by the _____ State OSHA-approved plan (if applicable). (no entry if state does not have an OSHA approved plan)

In addition, the COTR shall ensure that contractor personnel have received Hazard Communication training in accordance with the Federal and state OSHA requirements (as applicable).

SECTION D
Worksite Hazardous Chemical List

Site/Location: _____ Region: _____

Address: _____

The following is a master chemical list of all known hazardous chemicals used at this facility. Further information on each noted chemical can be obtained by reviewing the worksite Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS).

HAZARDOUS CHEMICAL LIST							
Product Name on Label	Manufacturer Listed on Label	Generic Name	Operation/ Work Area Used	Quantity on Hand (oz., gal, ltr, lbs., tons)	Date entered into system	ASN, NSN, or Part #	Location

SECTION E

Labeling Information

To comply with revised OSHA HCS (2012), chemical warning labels shall include the following information:

Product Identifier 1 - product name, chemical name, or trade name

Signal Word - stating the degree of hazard, such as “**Caution!**”, “**Warning!**” or “**Danger!**”

Hazard Statement means a statement assigned to hazard and category that describes the nature of the hazard(s) of a chemical, including where appropriate a degree of hazard. ”

Precautionary Statement - what to do to avoid injury or illness, such as: “**acute breathing vapors**” or “**wash thoroughly after handling**”

Pictograms – a composition that may include a symbol plus other graphic element, such as a border, background pattern, or color intended to convey specific information about the hazards of a chemical. Eight pictograms designed under the revised OSHA HCS for application to hazard category.

Name, address and telephone number of the chemical manufacturer, importer or other responsible party.

Labels may also include:

Instructions in Case of Exposure - first aid information for exposure to the chemical(s).

Fire, Spill, or Leak Instructions - how to put out or control fires and clean up leaks or spills.

Handling and Storage Instructions - special procedures for handling and storing chemical containers.

Antidotes - measures that can be used by medical personnel to counteract the effects of chemical exposure.

Notes to Physician - information for physician concerning exposure to the chemical(s).

Disposal Instructions - special disposal instructions may be provided on the label; however, follow state and local disposal requirements.

As of June 1, 2015, all labels will be required to have pictograms, a signal word, hazard and precautionary statements, the product identifier, and supplier identification. A sample revised HCS label, identifying the required label elements can be found at the following OSHA web page: https://www.osha.gov/Publications/HazComm_QuickCard_Labels.html. Supplemental information can also be provided on the label as needed.

Hazard Communication Standard Pictogram

As of June 1, 2015, the Hazard Communication Standard (HCS) will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

HCS Pictograms and Hazards		
<p>Health Hazard</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<p>Flame</p>  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	<p>Exclamation Mark</p>  <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
<p>Gas Cylinder</p>  <ul style="list-style-type: none"> • Gases Under Pressure 	<p>Corrosion</p>  <ul style="list-style-type: none"> • Skin Corrosion/Burns • Eye Damage • Corrosive to Metals 	<p>Exploding Bomb</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
<p>Flame Over Circle</p>  <ul style="list-style-type: none"> • Oxidizers 	<p>Environment (Non-Mandatory)</p>  <ul style="list-style-type: none"> • Aquatic Toxicity 	<p>Skull and Crossbones</p>  <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)

SECTION F

Worksite Training Records

SITE NAME: _____



Enter name of site, location

HAZARD COMMUNICATION TRAINING RECORD

This certifies that

Employee name

has received Hazard Communication Training as described in the Hazard Communication Program. The training was conducted on _____

date

Instructor's signature

I understand the Hazard Communication Standard requirements and know where the written NWS Hazard Communication Program is located. I will perform my job in compliance with instructions contained herein.

Employee signature

date

SECTION G

NWS Hazardous Chemical List Requirements

H.1 How to Identify Hazardous Chemicals. The responsibility for determining whether a chemical is hazardous lies with the chemical manufacturer or importer of a chemical. The chemical manufacturer or importer shall pass this information to their customers. As a user of chemicals, NWS employees have to rely on the evaluation received from these suppliers through labels on containers and material safety data sheets (MSDS) (SDS). To prepare a list of the chemicals at the work site, the site shall be surveyed and the names of chemicals that have a label indicating a potential hazard shall be written down or look for words such as: DANGER, WARNING, CAUTION, or HARMFUL on the warning label. Personnel involved in surveying the site shall also be aware of hazardous substances that are not enclosed in containers and that are generated during work operations (e.g., soldering or welding fumes, dusts, etc.) or in normal administrative tasks (e.g., copier toner, printer cartridges, or pen inks).

Check whether any of the chemicals identified during the survey are listed in the following publications:

- Title 29 Code of Federal Regulations (CFR) Part 1910, Subpart Z, Toxic and Hazardous Substances;
- The American Conference of Government Industrial Hygienists (ACGIH) latest edition of Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment; and
- The latest edition of the Annual Report on Carcinogens for suspected or confirmed carcinogens by the National Toxicology Program, or the International Agency for Research on Cancer (IARC) in the latest edition of their IARC monographs.

The Occupational Safety and Health Administration (OSHA) provides interpretations of the Act and the Hazard Communication Standard for various products, based upon users' requests. Once the hazardous chemicals list is completed, it shall be reviewed to determine if any of the materials or chemicals are exempted by 29 CFR Part 1910.1200 paragraph (b)(6). For example, rubbing alcohol maintained at a first-aid station would be exempt under paragraph (b)(6)(vi) of the 29 CFR 1910.1200 standard because it is intended for personal use by employees. To be prudent, some employers include all chemicals even if they are exempted. In general, if there is any question regarding a particular chemical, it is best to include that chemical in the hazardous chemical list. The listing shall include all chemicals at the work site rather than rely on the exemption rule.

H.2 How to List Chemicals in the Workplace. All hazardous chemicals known to be present in the workplace shall be listed, using an identifier that appears on the appropriate MSDS (SDS) and on label for the chemical. The list may also include common or trade names, Chemical Abstract Service (CAS) Registry numbers, etc. See Section D for NWS Hazardous Chemicals List requirements. The master list shall be compiled for the entire workplace and shall include the lists developed for individual buildings associated with the facility. This master list is designed to be an inventory of all items for which an MSDS (SDS) shall be obtained. It shall be a part of the written Hazard Communication program and shall be available to employees upon

their request. The following list identifies most common types of potentially hazardous chemicals and chemical products that may be present at the work site:

Acids	Insecticides
Adhesives	Janitorial supplies
Aerosols	Kerosene
Asbestos	Lacquers
Batteries	Lead
Battery fluids	Lye
Benzene	Metals and welding rods used in welding
Catalysts	Oxalic acid
Caustics	Paints
Cleaning agents	Pesticides
Cool tar pitch	Plastics
Coatings	Process chemicals
Compressed gases such as hydrogen, propane, oxygen, etc.	Resins
Copier toner (only for those who service the copier)	Sealers
Degreasing agents	Shellacs
Detergents	Solders
Dusts	Solvents
Etching agents	
Fiberglass	
Flammables	
Foaming resins	
Fuels	
Gasoline	
Glues	
Greases	
Industrial oils	
Inks	

Strippers

Surfactants Varnishes

Wood preservatives

Xylene

Thinners

Interpreted as Exempt, under 29 CFR 1910.1200 (b)(6)(iv)

“white out”

most office products (pens, pencils, adhesive tape)

copier toner - for those who use the copier intermittently

Typical NWS Hazardous Chemical Products

helium

hydrogen

oxygen

propane

acetylene

mercury

potassium hydroxide

lead acid batteries

AFOS toner

solvents

gasoline

lubrication oils and greases

diesel fuel

dielectric oil

paints

SECTION H

Material Safety Data Sheet/Safety Data Sheet Requirements

I.1 Introduction. The Material Safety Data Sheet (MSDS), called Safety Data Sheet (SDS) under revised OSHA HCS is a detailed information bulletin prepared by the manufacturer or importer of a chemical that describes the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling, and use, emergency and first aid procedures, and control measures. Information presented in an MSDS (SDS) can assist in the selection of safe products and can help to prepare employers and employees to respond effectively to daily exposure situations as well as to emergency situations.

MSDSs (SDSs) are a comprehensive source of information for all types of employers. There may be information on the MSDS (SDS) that is not useful or important in your particular operations. Concentrate on the applicable portions. Generally, hazard information and protective measures shall be the focus of concern.

I.2 OSHA Requirements. Chemical product buyers are entitled to obtain MSDS (SDS) automatically upon the purchase of the material. When new and significant information concerning a product's hazards or ways to protect against the hazards becomes available, chemical manufacturers, importers, or distributors shall add it to their MSDS within three (3) months and provide it to their customers with the next shipment. Station managers shall ensure that MSDSs (SDSs) for each hazardous chemical used in the workplace are available. If there are multiple suppliers of the same chemical, there is no need to retain multiple MSDSs (SDSs) for that chemical.

I.3 Shipments. While MSDSs (SDSs) are not required to be physically attached to a shipment, they should accompany or precede the shipment. When the manufacturer/supplier fails to send an MSDS (SDS) with a shipment labeled as hazardous chemical, the ordering employee shall obtain one from the chemical manufacturer, importer, or distributor as soon as possible. Similarly, if the MSDS (SDS) is incomplete or unclear, the Safety or Environmental/Safety Focal Point shall contact the manufacturer or importer to obtain clarification or missing information. Section J provides a sample letter for requesting an MSDS (SDS) or additional information.

I.4 Obtaining MSDS (SDS). When the Safety or Environmental/Safety Focal Point is unable to obtain an MSDS (SDS) from a supplier or manufacturer, he/she shall submit a formal written complaint to the nearest OSHA area office.

I.5 Sections of an MSDS (SDS). OSHA specifies the information to be included on an MSDS (SDS). The MSDS shall be in English and, at a minimum, and under revised OSHA HCS include the following information:

- (i) Section 1, Identification;
- (ii) Section 2, Hazard(s) identification;
- (iii) Section 3, Composition/information on ingredients;
- (iv) Section 4, First-aid measures;

- (v) Section 5, Fire-fighting measures;
- (vi) Section 6, Accidental release measures;
- (vii) Section 7, Handling and storage;
- (viii) Section 8, Exposure controls/personal protection;
- (ix) Section 9, Physical and chemical properties;
- (x) Section 10, Stability and reactivity;
- (xi) Section 11, Toxicological information.
- (xii) Section 12, Ecological information;
- (xiii) Section 13, Disposal considerations;
- (xiv) Section 14, Transport information;
- (xv) Section 15, Regulatory information; and
- (xvi) Section 16, Other information, including date of preparation or last revision.

SECTION I

NWS Material Safety Data Sheet/Safety Data Sheet Request

SAMPLE LETTER REQUESTING AN MSDS (SDS)

Weather Forecast Office
National Weather Service

City, State, Zip Code

Blitz Manufacturing Company
1923 Oak Grove Lane
Springfield, Massachusetts 02110

Gentlemen:

The Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) requires employers to obtain material safety data sheets (MSDS) or Safety Data Sheets (SDS) for all hazardous substances used in their facility, and to make these MSDS(s) (SDS) available to employees potentially exposed to these hazardous substances.

We request a copy of the MSDS (SDS) for your product listed as Part/Stock Number _____ We did not receive an MSDS (SDS) with the initial shipment of the _____ (list the product name) delivered to us on _____ (specify date). We also request any additional information, supplementing the MSDS (SDS), or any other relevant data that your company or supplier has concerning the safety and health aspects of using this product.

Please consider this letter as a standing request to your company for any information concerning the safety and health aspects of using this product that may become known in the future. The MSDS (SDS) and any other relevant information shall be sent to us within 10, 20, 30 days (select appropriate time). Delays in receiving the MSDS (SDS) information may prevent use of your product. Please send the requested information to:

Mr./Mrs./Ms. _____
Safety or Environmental/Safety Focal Point
Street Address _____
City, State Zip Code _____

NWSM 50-1115 JULY 16, 2014

Please be advised that if we do not receive the MSDS (SDS) on the above chemical by _____(date), we shall notify OSHA of our inability to obtain this information. It is our intent to comply with all provisions of the Hazard Communication Standard (1910.1200). Availability of MSDS(s) (SDS) is integral to this effort.

Your cooperation is greatly appreciated. Thank you for your timely response to this request. If you have any questions concerning this matter, please contact Mr./Mrs./Ms. _____
at () _____ - _____

Sincerely,

Safety or Environmental/Safety Focal Point

**SAMPLE LETTER REQUESTING
ADDITIONAL INFORMATION ON MSDS (SDS)**

Weather Forecast Office
National Weather Service

Street Address

City, State, Zip Code

ACE Chemical Company, Incorporated
214 Capitol Drive
Richmond, Virginia 23230

Dear Mr. Winston:

In an effort to comply with the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard set forth in 29 CFR 1910.1200, the National Weather Service is seeking additional information on a chemical produced by ACE Chemical Company. The material safety data sheets (MSDS) (SDS) forwarded to us appear to be deficient in the following:

1. Clear-VU 210 - no health effects listed.
2. Cleanup 34 - Solvent - no physical hazard listed.

Please be advised that in order to comply with the Hazard Communication Standard and to provide adequate training for our employees, we shall have complete MSDSs (SDSs), particularly for the above-named items. Thank you for timely response to this request. Your cooperation is greatly appreciated.

Sincerely,

Safety or Environmental/Safety Focal Point

SECTION J
Training Program

J.1 Introduction. Training is an integral part of the Hazard Communication Program. NWS employees need to know about the hazardous materials and chemicals with which they work. They need to know whether these materials and chemicals present a risk to their safety or health, and how to minimize or eliminate such risks.

The Station Manager shall ensure that all employees receive initial Hazard Communication training and re-training, as appropriate. The following are available and recommended training resources. Employees involved in use of hazardous materials and chemicals shall be trained on requirements of revised OSHA HCS of 2012. To assist with this effort, online course was developed and posted on secure NOAA SECO web site:
<https://sites.google.com/a/noaa.gov/seco/>.

J.2 Training Checklist.

	<u>Complete</u>	<u>Incomplete</u>
1. Establish Hazard Communication training program.	_____	_____
2. Identify employees who need training.	_____	_____
3. Establish training program that ensures new employees are informed and trained at the time of their initial assignment and whenever new hazards are introduced.	_____	_____
4. Inform employees of the requirements of the Hazard Communication standard.	_____	_____
5. Inform employees of the location and availability of the written Hazard Communication Program, including the required list(s) of hazardous chemicals and Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS).	_____	_____
6. Inform employees of any operations in their work areas where hazardous chemicals are present.	_____	_____
7. Train employees about the measures that can be used to protect them from the chemical hazards.	_____	_____
8. Train employees about the physical and health hazards of the chemicals in the work area.	_____	_____

J.2 Training Checklist.

	<u>Complete</u>	<u>Incomplete</u>
9. Train employees about the methods to detect the presence or release of hazardous chemicals in the workplace.	_____	_____
10. Train employees in the use of proper work practices, personal protective equipment and clothing, and other controls to reduce or eliminate their exposure to the chemicals in their work areas.	_____	_____
11. Train employees in emergency and first aid procedures and signs of overexposure.	_____	_____
12. Train employees to understand labeling system and MSDS (SDS) and how to obtain and use the appropriate hazard information.	_____	_____
13. Establish procedures to ensure proper labeling for containers that hold hazardous chemicals.	_____	_____
14. Establish procedures to identify and inform employees of new hazardous chemicals before they are introduced into a work area.	_____	_____
15. Establish a way to inform employees of new hazards associated with the chemicals they already use.	_____	_____
16. Establish a procedure to train employees involved in performing hazardous non-routine tasks (e.g., confined space entry, etc.).	_____	_____
17. Establish procedures to evaluate the effectiveness of the training program and to keep track of personnel training.	_____	_____

SECTION K

Cleanup and Disposal of Typical Hazardous Materials and Wastes

K.1 Hazardous Materials Used in the National Weather Service:

The following is the list of hazardous materials typically used by NWS personnel:

- hydrogen (for balloon launching),
- potassium hydroxide (for hydrogen generators),
- mercury (applicable to barometers, thermostats, mercury switches, rotary joints),
- printer plotter module (PPM) toner/dispersant [Automation of Field Operations and Services (AFOS)],
- lead acid, mercury-oxide, and other batteries,
- propylene glycol when contaminated by oil (for precipitation gages),
- dielectric oil (for doppler weather surveillance radar, WSR-88D),
- solvents and degreasers,
- diesel fuel,
- paints, and
- cleaners.

The above listed hazardous materials have a potential for release during routine NWS operations. A release is defined as any spilling, leaking, pumping, emitting, emptying, discharging, injection, escaping, leaching, dumping, or disposing into the environment. The term excludes release of nuclear materials and normal application of fertilizers.

K.2 Material Safety Data Sheets (MSDS) or Safety Data Sheet (SDS)

MSDSs or SDSs for most of hazardous materials utilized by NWS personnel acquired through the Consolidated Logistics System (CLS) are available at the National Logistics Support Center (NLSC). When ordering an item, the Safety and Environmental/Safety Focal Point shall request an MSDS (SDS) unless it is already available at the site.

If any chemical product or item containing a chemical is purchased at a local specialty store, the purchaser shall ask the vendor for the MSDS (SDS). The instructions specified in the written NWS Hazard Communication Program shall be followed. Certain items in stock at NLSC are identified as potentially hazardous to human health; however, they are not assigned hazardous code in CLS. Currently, hazardous material codes in CLS are based upon Department of Transportation classifications. It is good operational practice to obtain MSDS (SDS) even for the items that do not display typical hazardous characteristics, but may present health hazards.

K.3 Small Spill Cleanup (General guidelines). The following are general steps for NWS personnel to minimize the hazards generated by a small spill of hazardous or potentially hazardous substances:

- evaluation,
- site security,
- notification,
- personal protective equipment,
- controlling the spill,
- containing the spill,
- clean up,
- waste transportation.

Each of the above steps is composed of subsections that are described below. A thorough pre-planning is necessary to ensure a safe response to hazardous materials spills.

K.3.1 Evaluation. The process of evaluation allows the situation to be sized up and the most *immediate hazard* to be identified. The following steps shall be followed:

- Identify spill “transportation” mechanism.

Spill “transportation” mechanisms are routes by which the spilled material shall move. These routes may include drains, sumps, channels, ducts, and exposed soils. Consider the physical/chemical properties of the material that has been released. For instance, if the spill is a powdered material, a breeze might create a hazardous dust as particles become airborne. Liquids and heavier than air gases tend to flow along low areas. Lighter than air gases will dissipate unless weather conditions or obstructions (such as buildings) prevent the escape of the gas.

- Identify labeling, container’s material and condition, or other relevant information.

Look for labels, especially Department of Transportation (DOT) warning labels, National Fire Protection Association (NFPA) 704 Warning Diamonds, or labels meeting revised OSHA HCS requirements.

Note the type and construction material of the container (e.g., open head, steel 55-gallon drum or tight head polypropylene 5-gallon can).

If possible, note the condition of the container. Check for the following: dents, ruptures, physical damage, valve or bung leaking, and container corrosion.

- Obtain the MSDS (SDS) for the product.

K.3.2 Secure the Area. In order to secure the area, barriers such as caution tape or cones may be put up. If more than one NWS employee is available, one may perform a security role, keeping other employees out of the area while a second employee notifies a supervisor.

K.3.3 Notify Supervisor(s). When the area is secured so that an unsuspecting individual shall not be harmed by chancing upon the spill, the person who discovered the spill shall notify their Safety or Environmental/Safety Focal Point and the Station Manager.

Important information that needs to be conveyed to the Safety or Environmental/Safety Focal Point and the Station Manager includes:

- exact *location* of the spill,
- *volume* of material released,
- *rate* of release,
- *direction* of spill movement, and
- *product* involved.

Other important information may include:

- color, appearance, and form of spilled substances (for unknowns),
- fires or ignition sources,
- chemical reactions, and
- spill running off the property.

K.3.4 Personal Protective Equipment (PPE). For hazardous materials that can be released into the environment, all potentially affected NWS employees shall have training regarding the proper use of personal protective equipment. For most small spills, the extent of personal protective equipment is limited to chemical resistant gloves, protective eye wear, possibly a respirator (air purifying), and a chemical resistant apron. Steel-toed shoes and other equipment, including non-sparking tools and chemical resistant clothing, may also be required.

K.3.5 Control the Spill. Simply closing a valve on a pipe that is upstream from the release, tightening a bung on a drum, or up-righting a container can easily control many small spills. Employees are not encouraged to take unsafe steps to control spills. For instance, no one shall attempt to upright a 55-gallon drum without assistance or without using a drum cradle.

K.3.6 Contain the Spill. Where “control the spill” refers to stopping the release at the source, “containing the spill” refers to stopping the movement of the spilled material once it has been released. Spill containment may include such things as using dikes, booms, pads, or other materials to stop the flow of the spilled chemical. Spill containment devices are typically specific for the type of chemical. For instance, a boom manufactured for petroleum spills will not be effective in the containment of a caustic material release.

The appropriate spill containment devices shall be placed in the close proximity to the area where these chemicals are stored or used. At NWS facilities, this applies to the emergency generator spill kit, or the mercury spill kit located near a barometer. A spill kit works well for this purpose and may combine the features and equipment necessary to perform spill cleanup steps described in Section K.3.

K.3.7 Clean Up. Basically, there are three means of cleaning up a spill. The material may be recovered, absorbed, or neutralized. Once the spill is cleaned up, the debris generated during this operation needs to be disposed of properly. Also, any contaminated equipment (including personal protective equipment) and personnel shall be decontaminated.

- Recovery.

The recovery of a spill requires appropriate equipment, such as a special vacuum unit. Usually, recovery requires some filtering or other means of separating out the debris from the product. For example, there is a special vacuum unit designed to vacuum mercury spills.

- Absorption.

Absorption of a spill requires the use of a material which will not react with the spill but will soak it up, collecting it into a form which may be safely handled.

Pads or booms made of absorbent material are commonly used (this applies to oil spills). Clay-based litters such as a kitty box litter, once commonly used, have been replaced for several reasons. First, the clay-based litters do not absorb many materials. They generate a heavy waste with high disposal cost. Also, they tend to produce dusts, which, in combination with the spilled material, may create a respiratory hazard.

- Neutralization.

If the spilled material is corrosive (either an acid or a base), neutralizing the spill before attempting to containerize the debris may be safest.

Acids may be neutralized with bases such as metallic carbonates (sodium carbonate is known as soda ash) and bicarbonates (sodium bicarbonate is baking soda), or lime (calcium hydroxide).

Bases may be neutralized with acids such as acetic acid (vinegar). For example, potassium hydroxide spills shall be neutralized by a 5 percent vinegar solution.

- Disposal.

Containment debris may meet the Environmental Protection Agency (EPA) regulatory definition of a hazardous waste or hazardous debris [as defined in the Resource Conservation and Recovery Act, (RCRA)]. If so, specific steps shall be taken to ensure the safe disposal of this waste material in accordance with applicable regulatory requirements. Many local jurisdictions have established programs for the collection of hazardous waste from small businesses, small Government facilities, households, etc. Municipal landfill or hazardous material transfer stations shall be contacted to verify if they can accept hazardous waste generated at small Government facilities.

If the debris does not meet the regulatory definition of a hazardous waste, it may be disposed of along with commercial solid waste (trash). If there are any questions regarding the disposal of hazardous waste, the NWS Regional or Operating Unit Environmental/Safety Coordinator, or the State environmental agency shall be contacted

for assistance. Local landfill may also be able to help with determining the best way to dispose the waste (note: accepting liquid waste is illegal for landfills).

- Decontamination.

Equipment and personnel decontamination is typically very easy. The following is a simplified overview of decontamination procedures. The actual steps taken shall be appropriate for the chemical being handled during the spill cleanup. MSDS (SDS) give specific recommendations on decontamination.

- a. PPE (e.g., gloves) utilized during cleanup can be thrown away (preferably with the contaminated debris). The gloves shall be inverted so that the contamination is “contained” inside the glove.
- b. Respirators shall be washed with a mild soap and water, thoroughly dried, and inspected prior to storage (cartridges shall be removed in most instances). Alcohol shall not be used to clean respirators because it can degrade the face piece material. Respirators shall be stored in a clean, dry bag away from sources of heat, chemicals, light, and dust.

<p>NOTE: Respirators shall not be used unless Respiratory Protection Program is established as described in Chapter 10, Respiratory Protection.</p>
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- c. Tools may also be washed in a mild soap-and-water solution (trisodium phosphate is a very common cleaner used to decontaminate equipment).
- d. If NWS personnel come into contact with chemical (skin, eyes, etc.), the affected area shall be washed, generally by using plenty of water and a mild soap (for skin). MSDS (SDS) recommendations shall be followed.
- e. NWS personnel involved in a spill cleanup shall be especially careful of material which may be on the soles of their shoes. The “decontamination” area shall be near the spill site to avoid tracking contamination into clean areas. Certain materials, such as leather, are difficult to decontaminate adequately.

- Reporting.

Section 304 of the Superfund Amendments and Reauthorization Act (SARA) and the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) require generators of waste to report a release of hazardous substance equal to or greater than reportable quantities. The release shall be reported only to the National Response Center (1-800-424-8802) and the State Emergency Response Commission.

Regional/Operating Unit Environmental/Safety Coordinator, and NOAA SECO must be immediately notified when the spill occurs. This is applicable to 1 pound of mercury, 100 pounds of spent solvent (tetrachlorethylene), 1 pound of polychlorinated biphenyls (PCB), and other regulated substances.

- Waste Transportation

If the field office and Operating Unit does not generate more than 100 kg (220 lbs.) of hazardous waste or 1 kg of acute waste, it is defined as a Conditionally Exempt Small

Quantity Generator (CESQG). The CESQG facility is excluded from full EPA requirements applicable to hazardous waste transportation, labeling, and manifesting. However, DOT regulations apply when waste is transported to the disposal facility.

CESQG status may not apply to some NWS leased facilities (e.g., at universities, FAA offices, etc.). If NWS offices have CESQG status, NWS employees can self-transport small quantities of hazardous waste. Otherwise, certified waste transporters shall be used.

*Hazardous materials or waste can be transported **only in the Government vehicles.***

When self-transporting the waste to a disposal/collection site, NWS personnel shall be aware that rules imposed by the Department of Transportation (DOT) and by the Environmental Protection Agency (EPA) shall be followed.

K.4 Mercury Cleanup. Mercury is a naturally occurring metal found throughout the environment as the normal breakdown of minerals in the earth's crust. Mercury is a heavy metal that, in a liquid state, can readily evaporate even at room temperature. An increase in room temperature would raise the rate of mercury evaporation. Vapors are colorless and odorless, therefore, they cannot be detected by human senses. Only mercury detectors (sniffers) can detect actual levels of mercury vapors in the surrounding air. Most exposures on the job occur as a result of inhaling mercury vapor or by getting mercury on the skin when cleaning up a spill of metallic mercury. The Occupational Safety and Health Administration (OSHA) regulates the level of mercury vapors to which workers can be exposed. That level is called the Permissible Exposure Limit (PEL) and it is 0.1 mg of mercury in one cubic meter of air. Several studies conducted at the National Institute of Safety and Health (NIOSH) showed that a short exposure to a higher level of mercury vapors is less dangerous than a prolonged exposure to a lower level of mercury vapors. NIOSH recommends a PEL of 0.05 mg of mercury in one cubic meter of air. NWS employees can encounter mercury spills from broken thermometers, switches, old radars' rotary joints, Fortin barometers, and standard barometers.

K.4.1 Small Mercury Spills from Broken Thermometers/Mercury Switches. It is easier to clean up small mercury spills from broken thermometers and mercury switches, than larger spills from broken barometers. The level of mercury vapors from small spills will most likely not exceed the PEL, unless the spill occurs in an extremely small space without any ventilation. However, to be on the safe side, when a spill occurs, one shall lower the space temperature and ventilate the space if possible. Opening windows and using portable exhaust fans to improve ventilation is advisable.

It is required that each field office, Operating Unit, and headquarters office have a "mercury spill kit," which includes a small manual vacuum pump, a jar of mercury absorption powder, and proper eye and hands protective equipment. The procedures for cleaning up mercury spills are as follows:

- Read the MSDS (SDS) before beginning the cleanup procedure.
- Wear polyethylene, rubber, or polyvinyl chloride (PVC) gloves, plastic disposal boot protectors, and safety glasses when performing a cleanup.
- Use the manual vacuum pump to vacuum a mercury puddle and droplets of mercury.

- If spill occurred on a hard surface and the removal of small droplets by vacuum pump is almost impossible, use mercury absorbent sponges to finish the cleanup.
- In deep cracks mercury absorbent powder shall be wiped over the contaminated areas to ensure that all residual mercury droplets will be converted into a mercury amalgam. The amalgam then can be collected and removed.
- The removal of mercury from carpeted areas is very difficult. All visible droplets of mercury shall be picked up by a mercury vacuum pump. After that, a carpet shall be treated with a paste of mercury absorbent powder and water. The level of mercury vapors shall be checked as described in the cleanup procedure for barometer spills in succeeding paragraphs.
- Mercury recovered from a spill can be stored in plastic or glass bottles. All mercury residues shall be collected into a plastic zip-lock bag. Usage of plastic bags is not sufficient if broken glass is involved.
- Sponges designed to absorb small mercury spills on hard surfaces can be used. They can be bought separately. A sponge needs to be moistened and small droplets can be simply wiped up. The sponge and its container shall be properly disposed of as described below.
- If field office and Operating Unit has an arrangement with a local hazardous waste disposal company and the company handles mercury, arrange for pick up. Otherwise, find other local companies that can provide mercury pickup and disposal. Also, check with local recycling facilities if they accept small quantity of mercury.
- Arrange with your local Hazardous Material Transfer Station (usually associated with a landfill station) for mercury disposal. Many counties have program in place to accept wastes from small businesses and small federal facilities. The Hazardous Material Division at a Transfer Station usually requires advance notice for hazardous material acceptance. They will accept pure mercury as well as broken thermometers and mercury switches. To prevent any spill accidents and mishandling of waste, use proper containers and keep the appropriate MSDS (SDS) on hand while transporting mercury waste.
- Always place the mercury container in a secondary container (a metal or plastic drum with a lid) to prevent any leaks or spills in case of an accident. Affix the proper label to the container: WASTE MERCURY, UN 2809, RQ. EPA hazardous waste identification number for mercury is U151.
- When self-transporting the waste, allowed only for CESQG, the rules of DOT Title 49 of the Code of Federal Regulations, Parts 100-199 (49 CFR 100-199) shall be followed. The personnel involved in transporting hazardous waste shall receive required DOT training. Otherwise, a local certified waste transporter shall be used.

K.4.2 Large Mercury Spills from Broken Barometers. The barometers used by personnel at NWS facilities contain a large amount of mercury. The Fortin barometer contains approximately 1.6 pounds of mercury, and the standard barometer can hold up to 4-5 pounds of mercury. These amounts of mercury, if spilled over the large floor area, can evaporate rapidly even at the room temperature. Since mercury vapors present a serious health hazard, immediate spill response actions are required. Facilities that have mercury barometers shall make arrangements for

emergency cleanup with the local Fire Department or local spill cleanup company. A person in charge of the spill response (e.g., Safety and Environmental/Safety Focal Point or other NWS personnel) shall attempt to contain the spill and to reduce mercury evaporation. Once the spill is contained, the Regional/Operating Environmental/Safety Coordinator, NOAA SECO, and NWS Safety Officer shall be notified.

The following steps shall be followed in case of a large mercury spill:

- Do not disturb a mercury puddle (any mercury movement will increase evaporation). Evacuate personnel if the spill is extensive, the room is small and the ventilation is poor. Isolate the spill area with signs, barriers, or tapes.
- Decrease room temperature, if possible.
- Prevent mercury vapors from entering the heating, ventilation, and air conditioning (HVAC) system by blocking return air registers.
- Ventilate area as much as possible (e.g., open windows). Use portable exhaust fans to increase air movement and to disperse the mercury vapors.
- The levels of mercury vapors in the air shall be monitored as soon as possible. A mercury sniffer is only device that can detect mercury concentration in the air surrounding the spill area. The local safety equipment rental stores shall be called to check if they have a mercury monitor available immediately. If measured mercury concentration is below 0.05 mg/m^3 , the spill is contained, and the area is ventilated adequately, personnel can remain in the office. If mercury reading exceeds 0.05 mg/m^3 , all employees shall immediately evacuate the office.
- If you are unable to monitor the air and, therefore, assure employees safety, call a local hazardous spill cleanup company to provide emergency cleanup or local Fire Department if prior arrangements have been made. Each field office and Operating Unit shall have a list of such companies on hand. Services of the companies that can provide cleanup of barometer spill shall be used at all NWS facilities.

All NWS employees working with mercury-containing equipment need to understand that mercury presents a serious danger to their health and safety. Therefore, the mercury-containing equipment, especially barometers, shall be handled with extreme care. In the event of a spill, the primary goal is to protect the employees from exposure to mercury vapors.

Mercury spills shall be properly reported. For example, if one pound of mercury is released into the environment (this does not apply if spill occurred within enclosed building or enclosed containment structure where there is no release to air, water, or soil), it shall be reported within 24 hours to the National Response Center (tel. 1-800-424-8802), and/or state or local environmental agencies.

K.5 Printer Plotter Module Toner Disposal.

K.5.1 Utilization of Safety Kleen or Other Hazardous Waste Disposal Company. Arrange for a semi-annual pick up of used toner. This is a more expensive option; however, it decreases NWS liabilities. Regional headquarters have a list of Safety Kleen offices in the vicinity of each WFO or WFO/RFC. Used toner shall be stored in small double walled containers with the lid closed

and properly labeled as “WASTE TONER.” The date when the container was first used shall be posted.

K.5.2 Local Collection Facility. A local hazardous material transfer station may accept waste toner. If NWS facility has CESQG status, waste toner can be self-transported to such facility. According to DOT standards, the toner is classified as a combustible liquid, packing group III. Containers for transporting toner shall be no more than 1 gallon, and can be made of plastics, glass, earthenware or metal when shipped by commercial shipping companies (Federal Express, UPS, etc.). The reuse of the original containers is encouraged; otherwise, small waste drums can be used for self-transporting to the local collection facility (e.g., hazardous material transfer station). It is recommended that the container be placed in an additional outer container filled with absorbing materials. The container shall be marked:

Waste combustible liquid n.o.s.

(Isoparaphinic hydrocarbon mixture)

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No other container labels or car placards are required when using ground transportation. Note that if the waste is transported by highway, placards are not required for vehicles carrying less than 1,000 lbs. of hazardous waste (up to two 55-gallons drums, depending upon specific weight of the substance, 8-10 lb./gallon). However, MSDS (SDS) shall be placed near the container.

K.5.3 Empty Toner Container. A bottle or other container is classified as “empty” when all waste has been removed using common practices such as pouring, pumping, aspirating, etc. Bottles of toner are “legally” empty, and, therefore, not regulated when all contents have been transferred. Since original toner containers are relatively small, all toner can be removed by pouring. There shall be no visible residue on the bottom of the container. Such container is considered to be empty and, therefore, not regulated, and can be disposed into regular trash. Note that a container with residue (as is often the case with AFOS toner) is not legally “empty” and shall be disposed as hazardous debris.

K.6 Cleanup Towels. The EPA classifies any cleanup towels as hazardous when they display “hazardous characteristics.” Towels contaminated with toner, diesel fuel, and solvents display ignitable characteristics. The following is the EPA definition of ignitability:

“Non-liquids capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burn so vigorously and persistently that it creates a hazard.”

Cleanup towels soaked with the hazardous substances would meet the definition and are identified as a hazardous waste. In some states, towels contaminated with mineral oils are classified as hazardous waste. Also, some states allow the cleanup towels to be washed by industrial cleaning facility and then re-used. In any case, call the state environmental agency to determine current regulatory requirements applicable to cleanup towels. Since regulations vary so much, the best management practice would be to collect and store towels at the site and dispose of them properly. Disposal options include a municipal hazardous material transfer/collection site or a licensed disposal company. Cleanup towels contaminated with flammable or other hazardous substances shall be stored and transported in fire-safe containers.

The containers shall be made from compatible materials and marked "contaminated towels." Local fire departments may require specific types of containers, colors, and labels. Contaminated towels shall not be accumulated on-site for more than 180 days.

K.7 Batteries.

The paragraphs below describe general requirements applicable to batteries. NWS personnel shall always consult with the state agency regarding current status of the rules for batteries.

K.7.1 Automotive lead acid batteries. These batteries are special hazardous waste regulated by EPA and shall be taken by NWS personnel to local collection sites or retailers for recycling.

K.7.2 Mercury-Containing and Rechargeable Batteries. Mercury-containing and Rechargeable Battery Act was passed by Congress and signed by the President in 1997.

This Act:

- Requires batteries to be labeled: "Battery shall be recycled or disposed of properly".
- Prohibits the sale of alkaline, magnesium, and carbon-zinc batteries that contain mercury and mercury oxide batteries.
- Prohibits the sale of nickel-cadmium and sealed lead-acid batteries if they are not labeled properly.

Recyclable Battery Recycling Corporation (RBRC) has been created to establish a national battery recycling program. The RBRC information service is available at 1-800-8-Battery.

K.7.3 Other Batteries. As there are so many different types of batteries used at NWS offices, it would be costly and time-consuming to conduct a laboratory test of each battery. Such tests would determine if a particular type of battery is "hazardous" (e.g., lead acid batteries). EPA does not provide data regarding which batteries are "hazardous waste batteries." It is a good operating practice to classify all batteries as "hazardous," and dispose of them at a collection site or a recycling facility.

K.7.4 General Precautions. Batteries shall be handled in such a manner that a release of the battery's contents to the environment is prevented. Under no circumstances shall batteries be disposed of in the trash.

- Keep batteries in a closed container compatible with the content of the batteries. The container shall not show leaks, spills and damage that could cause future spills.
- Do not break up batteries or open the closed cells.
- Different batteries can be placed in the same container; however, some collection sites require batteries to be separated by type.
- Clearly mark the container: "Used battery(ies)."

K.7.5 Transporting Batteries. Arrange with a local waste disposal company to pick up the batteries for disposal/recycling. This is a preferable method of disposal. When picking up batteries by an outside contractor is not feasible, either of the two methods described below is recommended:

- Check if local department or retail specialty stores accept used batteries for recycling and obtain any specific conditions for battery acceptance. As an infrastructure for universal waste collection develops, there will be more collection sites available. When NWS employees self-transport batteries to a collection site, they become universal waste transporters. The corresponding MSDSs (SDS) shall be kept in the vehicle during transport. Small transported quantities are excluded from full regulatory requirements (e.g., vehicle placarding, shipping papers) *only when Government vehicles are used*.
- Deliver used batteries to a municipal transfer station/collection facility which may be associated with a municipal landfill.

K.8 Shipping Instructions for Decommissioned Equipment.

K.8.1 Unbroken Thermometers and Mercury Switches. The Instrument Decommissioning Plan prepared at WSH, by Engineering Division personnel, includes a requirement to return unbroken thermometers, mercury switches, and mercury batteries from equipment replaced by ASOS to NWS National Reconditioning Center (NRC) in Kansas City, MO.

Shipping materials can be ordered from NLSC by contacting the shipping department at 1-816-926-3990. Please be prepared to provide the following information when ordering shipping materials from NLSC:

- Organizational Code
- Address of ordering unit
- Amount of items to be shipped
- ASN
- Accounting Code
- Any Special Instructions

NOTE: Contact NRC to verify current policy for shipment of unbroken Mercury Thermometers and Mercury Switches.

K.8.2 Shipping Mercury Barometers. Mercury spills resulting from the breakage of barometers must be prevented by following proper shipment procedures. The procedures for preparing the barometer for shipment using Princo packing material are described below. Special packing material for the G010D barometer shall be ordered from NLSC. Packing material included all required labels and markings.

- Before removing the barometer to be shipped from its mountings, adjust the mercury column all the way up to prevent breakage or loss of vacuum during shipment. This can be done by a series of three or four turns of the cistern screw. Pause for about thirty (30) seconds between each series of turns to assure that the air has time to bleed out of the cistern. When the mercury column gets to the top of the glass tube, you will feel a marked resistance to any further turning of the cistern screw. At that point, wait about five minutes and try the cistern screw again to make sure the column is all the way up. The barometer can now be packed for shipment.
- With the barometer hanging only by the top hanger, slide the plastic bag up over it.

- Remove the barometer from the hanger.
- Remove excess air from the bag and place a tie wrap around the top of the plastic bag to seal it.
- Place the bagged barometer into a foam, rubber-lined inner carton.
- Insert the inner carton containing the bagged barometer into the cardboard sleeve by turning it upside down and sliding it into the sleeve.
- Mark “Cistern End” of the sleeved barometer.
- Place a foam end cap over each end of the sleeve and insert the sleeve into the outer carton.
- Wrap wide filament tape around the outer carton at the center and near each end.
- Mark “Cistern End” of the outer carton, and label the outer carton with “LAY FLAT” and “FRAGILE” stickers or write it with a large red felt pen.
- The barometer can now be safely shipped.
- Fill out the Shippers’ Declaration of Dangerous Goods form:

NOTE: Ask NLSC to prepare Government Bill of Lading
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Proper Name:	Mercury Contained in Manufactured Articles
Class or Division:	8
UN Number:	UN 2809
Quantity and Type of Packing:	Cardboard Crate Containing 698.5 g (1.54 lb) Mercury Inside Sealed Plastic Liners
Packing Instruction:	805