

ART MODIFICATION NOTE 19, REVISION A (for Electronics Technicians)

Maintenance, Logistics and Acquisition Division

W/OPS12: KC

**SUBJECT** : Removal and Disposal Instructions for the ART-2 Transformer Chassis Assembly and ART-1/2 Ranging Unit Transmitter/Comparator System

**PURPOSE** : Remove and dispose of polychlorinated biphenyls (PCB) in the ART-2 Transformer Chassis Assembly and the ART-1/2 Ranging Unit Transmitter/Comparator System.

**EQUIPMENT AFFECTED** : ART-2 Transformer Chassis Assembly and ART-1/2 Ranging Unit Transmitter/Comparator System.

**PARTS REQUIRED** : ART-2 Replacement Plate and Weights Kit. The replacement plates/spacers/nut and the weights will be shipped (in August/September 2003) in two separate lots directly from the two manufacturers to the Meteorologist in Charge/Officer in Charge at each site. This kit should be stored in a secure place until used.

Removal/Disposal Kit from Tetra Tech EM, Inc.

No replacement parts are required for the ART-1/2 Ranging Unit Transmitter/Comparator System.

**MODIFICATION PROCUREMENT** : The ART-2 Replacement Plate and Weights Kit for the Transformer Chassis Assembly will be provided to each site by W/OPS12. WD-40 will be locally provided.

**SITES AFFECTED** : All ART-2 sites with a Transformer Chassis Assembly and all ART-1/2 sites with a Transmitter/Comparator System (see Table 1).

**ESTIMATED TIME REQUIRED** : 3 to 5 hours

**EFFECT ON OTHER INSTRUCTIONS** : ART Modification Note 19, Revision A supercedes ART Modification Note 19, dated August 11, 2003.

**AUTHORIZATION** : N/A

**VERIFICATION STATEMENT** : This modification procedure was successfully tested at the Sterling Research and Development Center, Sterling, VA.

**TECHNICAL ASSISTANCE** : For questions or problems pertaining to this modification note, please contact Kenneth Clark (W/OPS12) at 301-713-1833 x190, or e-mail at [kenneth.clark@noaa.gov](mailto:kenneth.clark@noaa.gov).

**NOTE:** Read this Modification Note completely before performing any of the Removal/Replacement/Disposal procedures.

## GENERAL

The ART transformers and ranging units containing high levels of PCBs need to be removed and disposed of in accordance with this procedure. This PCB equipment is located within domes mounted on the roofs of NWS upper air inflation buildings (UAIB). There are 58 Upper Air ART-2 sites with only Transformer Chassis Assemblies, 8 ART-2 sites with both Transformer Chassis Assemblies and Ranging Unit Transmitter/Comparators, and 5 ART-1 sites with Ranging Unit Transmitter/Comparators. These include an ART-2 and an ART-1 at Sterling Research and Development with PCB equipment (see Table 1). The remainder of this Modification Note is organized as follows:

## PROCEDURE

- A. HAZMAT Spill Response Procedure
- B. ART-2 Transformer Chassis Assembly Removal Procedure
- C. ART-2 (Only) Test and Alignment Procedure
- D. ART-2 Ranging Unit Transmitter/ Phase Comparator Removal Procedure
- E. ART-1 Ranging Unit Transmitter and Comparator Removal Procedure
- F. PCB Disposal Procedures
- G. Reporting Instructions

Table 1. Disposal Schedule for Sites With PCBs in Transformers and/or Ranging Units

Table 2. NOAA NWS Site Environmental/Safety Focal Points

Table 3. Uncrated Weight and Dimensions of Transformers and Ranging Units

ATTACHMENT A – Optical Theodolite Comparison Procedure

ATTACHMENT B – Sample Labels Required for Containers With PCBs

ATTACHMENT C – Sample Uniform Hazardous Waste Manifest

ATTACHMENT D – Sample EMRS Report

**PROCEDURE**

**NOTE:** Before performing this modification, all of the following conditions, materials, equipment, and personnel must be available:

- a. A clear day, no weather warnings, and approval of the on-site Meteorologist in Charge/Officer in Charge to remove the ART from service for 3 to 5 hours.
- b. ART-2 Replacement Plate and Weights Kit. Includes a plate (with 4 spacers, one lockwasher, and one nut), two 25-lb weights, and two 10-lb weights (for ART-2 Transformer Chassis Assembly replacement).
- c. Two maintenance personnel available for 3 to 5 hours. One operations person (Upper Air Focal Point) for 2 hours.
- d. Standard ART maintenance tools, including a 15/16-inch socket wrench, a 15-inch crescent wrench, and a ½-inch standard flat-blade screwdriver.
- e. For each site: one 55-gallon steel drum. Bismark, Del Rio/New Braunfels, and Sterling will receive two (2) 55-gallon steel drums.
- f. One shipping material packet for each drum containing: three required labels, two sets of protective gloves, one plastic drop cloth (8' x12'), four 3/8-inch by 16-inch by 20-inch absorbent pads, and additional instructions from Tetra Tech.
- g. Optical theodolite.

**A. HAZMAT SPILL RESPONSE PROCEDURE**

**CAUTION**

**Do not disassemble the Transformer Chassis Assembly or ranging units. Do not remove any capacitors or power supplies from these units.**

A spill of the PCB liquids contained within the transformer or ranging unit is unlikely given the strong construction of the assembled units. However, in the event of a spill, immediate action and notification are important.

1. Before starting the removal procedures, find and open the shipping material packet provided by the removal contractor (Tetra Tech EM Inc.). Remove the protective gloves, 8' x 12' drop cloth, and absorbent pads (four per container). Place these items in a convenient location at the bottom of the UAIB stairs so that they are ready for use if needed.
2. If a spill or leak occurs at any time during the handling of the transformers or ranging units, the individuals performing this procedure must take action. Immediately put on the protective gloves and contain the liquids using the absorbent pads provided. After containing the spill with the absorbent pads, resume placing the unit in the steel drum,

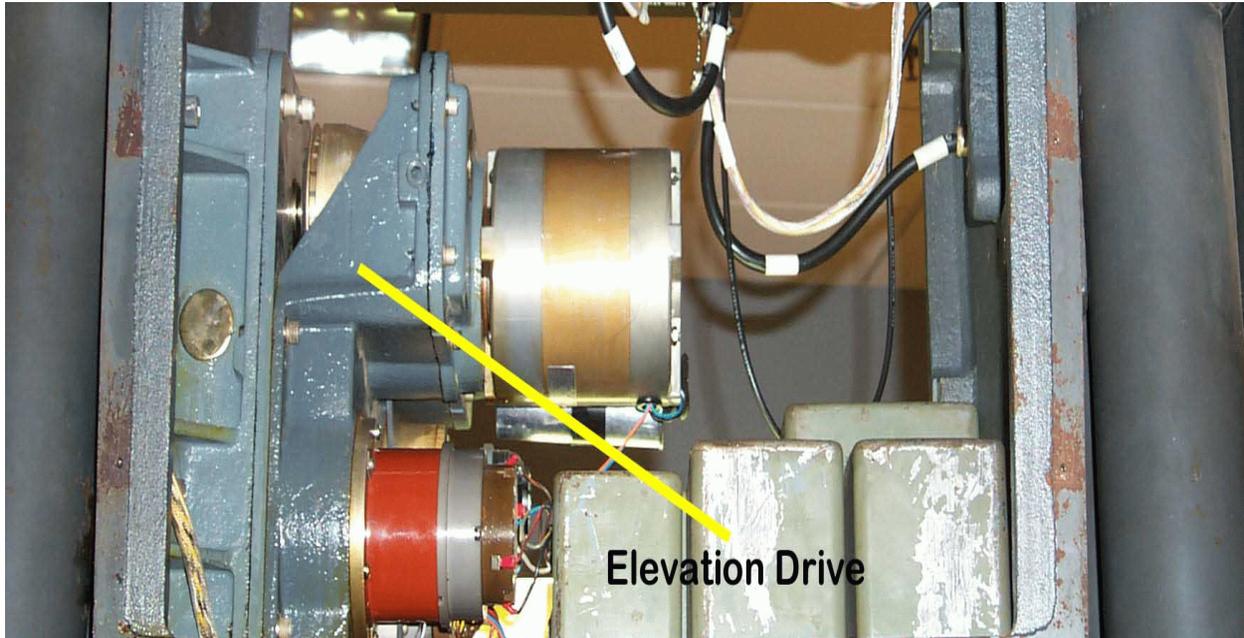
unless this would exacerbate the spill. Cover the spill with the plastic dropcloth to protect it from rain.

**NOTE:** If the spill is completely contained within the drum, and the drum remains in good condition, seal the drum. Only "Notification" of a contained spill to the EPA is required. The Meteorologist in Charge/Officer in Charge or NOAA Contracting Officer's Technical Representative (COTR) will issue further direction if necessary.

3. Once the spill is contained, cordon off areas affected by the spill or leak to prevent further disturbance.
4. NWS personnel should first report the spill to the local Environmental/Safety Focal Point and the Meteorologist in Charge/Officer in Charge. The Environmental/Safety Focal Point for each site is identified in Table 2.
5. The local Environmental/Safety Focal Point or other designated person should contact a local HAZMAT support contractor and request cleanup within 24 hours.
6. The local Environmental/Safety Focal Point should refer to the local Station Duty Manual, HAZMAT Section or Emergency Action Plan, and monitor the cleanup to ensure it is quickly and correctly performed.
7. NWS personnel should also report the spill to the NOAA COTR (Mark George at 303-497-3064) and Tetra Tech (John Yerton at 303-441-7900). A spill report should include the following information: 1) location and time of the spill; 2) spill response activities that were conducted; 3) estimated volume of PCB-containing fluid that was released; 4) identification of any affected soil or water; and 5) conditions and events that may have caused the spill. The NOAA COTR will prepare any reports required by the Environmental Protection Agency and any other agencies.

**B. ART-2 TRANSFORMER CHASSIS ASSEMBLY REMOVAL PROCEDURE**

The Parabolic Reflector Assembly and the Pylon Assembly are dynamically balanced by means of the Transformer Chassis Assembly (not electrically connected) and two lead weights attached to the housing. The Transformer Chassis Assembly (approximately 82 lbs) is bolted to the inside rear of the elevation housing. The Transformer Chassis Assembly (base plate) is mounted to the rear section of the Elevation Housing Assembly as shown in Figure 1.



**Figure 1.** Transformer Chassis Assembly (bottom view)

**CAUTION**

**All the transformer power supplies are mounted on the base plate and must not be removed from the chassis base plate.**

The Transformer Chassis Assembly will be replaced with the ART-2 Replacement Plate and Weights Kit provided to each site by W/OPS12. The kits will be shipped to the Meteorologist in Charge/Officer in Charge at each site in August 2003. The kits should be stored in a secure place until the site is ready to perform the modification. Each kit (weighing approximately 82 lbs) includes the following:

- a. New base plate to replace the existing Transformer Chassis Assembly. A 1-inch threaded center rod is attached (welded) to the center of the new plate.
  - b. A nut and lockwasher to hold the required weights to the new plate.
  - c. Four spacers to replace the existing spacers (nonremovable) on the chassis. (The existing four thumbscrews on the chassis will be used to install the new plate to the Elevation Housing Assembly.)
  - d. Barbell weights that include two 25-lb weights and two 10-lb weights.
1. Remove the Transformer Chassis Assembly as follows.

**CAUTION**

**Ensure all power is removed before performing this modification.**

- a. Manually slew the Antenna Assembly (1A1) to 90 degrees elevation.
- b. Remove the top cover (1A2A2A10) of the elevation housing (1A2) by loosening the 14 captive screws. (This step will be needed for installing the weights as specified in step 2.)
- c. Manually slew the Antenna Assembly to 0 degrees elevation and lock it in position.

**CAUTION**

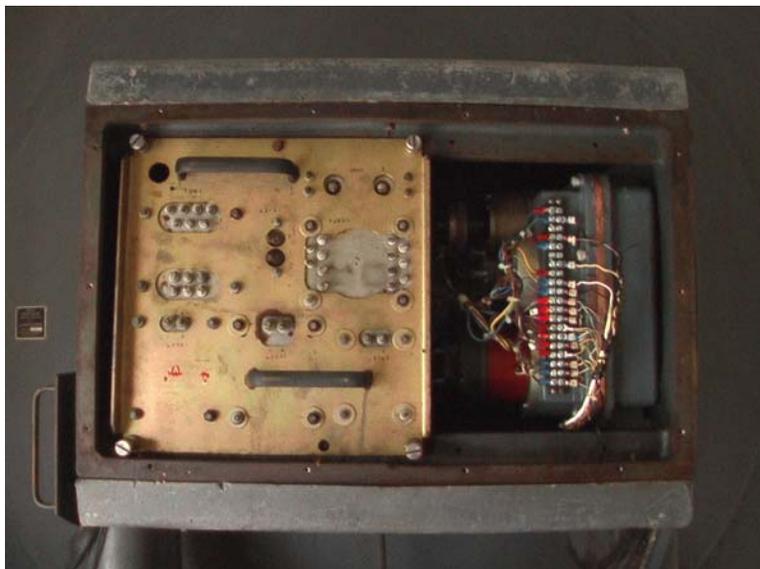
**Use the elevation assembly locking pin to hold the elevation assembly in the 0° position. This permits the removal of the Transformer Chassis Assembly without the danger of the elevation assembly moving due to imbalance.**

- d. Remove the rear cover (1A2A12) of the elevation housing (1A2) by loosening the 14 captive screws (see Figure 2).



**Figure 2.** Rear Cover of Elevation Housing  
(with screws removed for clarity)

- e. Remove the four thumbscrews (save screws for replacement) from each corner of the Transformer Chassis Assembly (see Figure 3).



**Figure 3.** Transformer Chassis Assembly (rear view)

**\*\*\*WARNING\*\*\***

**The Transformer Chassis Assembly weighs 82 pounds and therefore requires two people for lifting or moving, as noted in the following steps. DO NOT attempt to lift or move the assembly by yourself, as this may result in injury.**

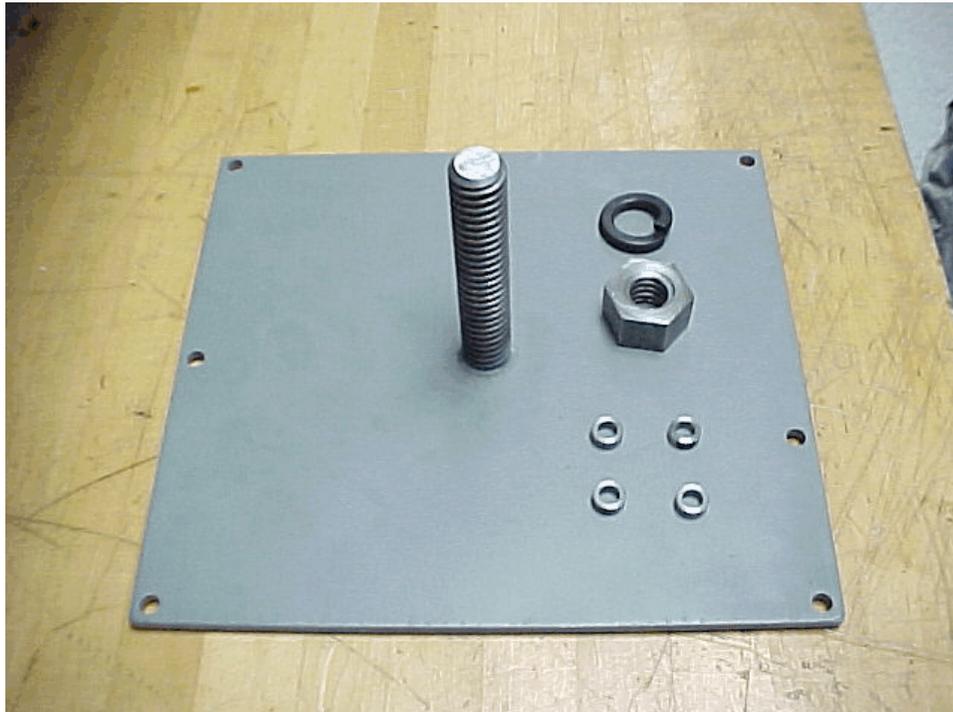
- f. **(Requires two people.)** With one person on each side holding on to one of the front panel handles, lift and remove the Transformer Chassis Assembly from the elevation assembly and carefully lower it to the floor. Tilt the unit to clear the bolt and nut (next to bottom left transformer chassis screw) attaching the lead weights to the Elevation Housing Assembly (see Figure 4).
- g. **(Requires two people.)** With one person on each side holding on to one of the front panel handles, carry the unit down the UAIB stairs and carefully set it on the ground next to the steel drum.
- h. Initiate the disposal procedure in accordance with Section F, paragraphs 7 and 8 (page 17).



**Figure 4.** Bolt and Nut Attaching the Lead Weights

**NOTE:** DO NOT disassemble this unit or remove the power supplies.

2. Install the Replacement Plate and Weights Kit as follows.
  - a. Ensure the Antenna Assembly is at 0 degrees elevation and locked in position.
  - b. Put a lubricating oil (WD-40) in each of the four thumbscrew holes and on the thumbscrew bolt threads.
  - c. Lift and align the replacement plate to the exact place of the previous Transformer Chassis Assembly (with center rod facing inside the elevation housing). Ensure the two plate alignment holes are located over the two holding pins (see Figure 5).



**Figure 5.** Transformer Chassis Replacement Plate

- d. After aligning the new plate on the elevation housing, pull the new plate back slightly from the housing. Put the 4 spacers on the 4 screws that were removed from the Transformer Chassis Assembly. To ensure proper screw alignment, insert all four screws half way into the holes while the plate is pulled back from

- the housing. Then tighten each screw evenly, progressing in a clockwise rotation.
- e. Unlock the antenna and manually slew the Antenna Assembly to 90 degrees.
  - f. If the top cover (1A2A2A10) of the elevation housing has not already been removed, loosen the 14 captive screws and remove it.
  - g. Place one of the 10-lb weights over the center rod of the replacement plate; then place the two 25-lb weights followed by the other 10-lb weight.
  - h. Place a lockwasher and nut on the rod to hold the weights tight. Use a 15-inch crescent wrench to firmly tighten the nut until the lockwasher is fully compressed (see Figure 6).



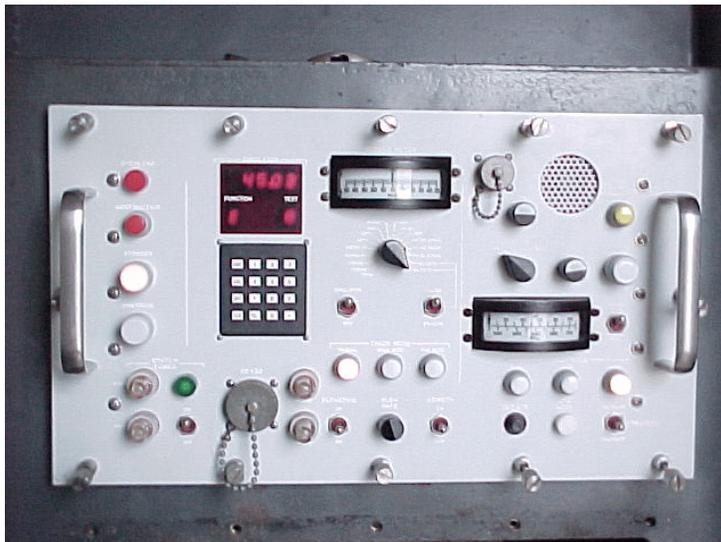
**Figure 6.** Replacement Plate and Weights Kit Installed in ART-2

- i. Replace the top cover of the elevation housing and tighten the 14 captive screws.
- j. Manually slew the Antenna Assembly to 0 degrees elevation.
- k. Replace the rear cover of the elevation housing and tighten the 14 captive screws.

- i. See Section C for procedures on verifying the operational status of the ART System.

### C. ART-2 (ONLY) TEST AND ALIGNMENT PROCEDURE

1. After replacing the ART-2 Transformer Chassis Assembly with the new ART-2 Replacement Plate and Weights Kit, check the stability of the elevation unit as follows:
  - a. With the power turned off, manually slew the antenna to approximately 45 degrees. Closely observe the elevation unit to see if it drifts up or down.
  - b. Manually slew the antenna to approximately 25 degrees. Closely observe the elevation unit to see if it drifts up or down. Note any drifting for later reporting under step h.
  - c. Power up the system. On the R/ACU, press the STANDBY button to illuminate the standby light (see Figure 7).



**Figure 7.** R/ACU Front Panel

- d. Execute Test 8 on the R/ACU front panel simulator as follows:
  - (1) Press 8 on the simulator keypad (the 8 appears in the upper display).
  - (2) Press the ENT key (the 8 appears in the lower display).
  - (3) Press the EXC key (RUN appears in the upper display).
- e. Execute the ELEVATION function on the simulator as follows:
  - (1) Press the DSP key on the keypad until "E" appears under FUNCTION on the display (see Figure 8).

- (2) Press the ENT key.
  - (3) Press the EXC key.
  - f. Set the antenna at 45 degrees. Observe the SIMULATOR display to verify that the elevation reading does not change (i.e., does not drift up or down).
  - g. Set the antenna at 25 degrees. Observe the SIMULATOR display to verify that the elevation reading does not change (i.e., does not drift up or down).
  - h. If any drifting occurs, weigh the Transformer Chassis Assembly removed from the ART-2. Call Ken Clark (W/OPS12) at 301-713-1833 x190 and describe the direction of the drift and specify the weight of the removed assembly. New weights will be provided.
2. After completing the modification, perform an elevation alignment in accordance with ART-1/2 Maintenance Note 21, Section 1.1.4 (Target Antenna Test), and Section 1.4.3.3 (Elevation Synchro Alignment). Other sections of Maintenance Note 21 are not required for this application.
  3. Conduct a Radiosonde test flight to verify the elevation alignment. Watch the flight results for erratic tracking patterns. Concurrent with the test flight, perform an optical theodolite comparison in accordance with procedures in Attachment A, excerpted from NWS Observing Handbook (WSOH) No. 10, Section 11.3.4, Rawinsonde Observations. After completing the test flight, return the ART-2 to operational status.

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**THIS COMPLETES THE ART-2 TRANSFORMER CHASSIS ASSEMBLY  
REPLACEMENT PROCEDURE.**

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**D. ART-2 RANGING UNIT TRANSMITTER/PHASE COMPARATOR REMOVAL  
PROCEDURE**

**CAUTION**

**Remove electrical power from the Transmitter/Comparator to prevent transients that could damage electrical components.**

1. On R/ACU, set the POWER switch to Off.
2. Remove the cable assembly from the ANT connector on the front panel of the Transmitter/Comparator.
3. Loosen the 12 captive thumbscrews on the front panel.

4. Using the handles on the front panel, pull the Transmitter/Comparator unit partially out of the pedestal housing until the track stops are engaged.
5. Remove the cable assemblies from the connectors.

**\*\*\*WARNING\*\*\***

**The Transmitter/Comparator is a single unit that weighs 95 pounds and therefore requires two people for lifting or moving, as noted in the following steps. DO NOT attempt to lift or move the unit by yourself, as this may result in injury.**

6. **(Requires two people.)** With one person on each side holding on to one of the front panel handles, release the slide locks, lift or slide the Transmitter/Comparator from the pedestal housing, and carefully lower it to the floor.

**CAUTION**

**Do not disassemble the ranging units. Do not remove any capacitors or power supplies from these units.**

7. **(Requires two people.)** With one person on each side holding on to the handles, carry the unit down the UAIB stairs and carefully set it on the ground next to the steel drum.
8. Initiate the disposal procedure in accordance with Section F, paragraphs 7 and 8 (page 17).

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**THIS COMPLETES THE ART-2 RANGING UNIT TRANSMITTER/  
PHASE COMPARATOR REMOVAL PROCEDURE.**

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**E. ART-1 RANGING UNIT TRANSMITTER AND COMPARATOR REMOVAL PROCEDURE****CAUTION**

**Remove electrical power from the Transmitter and Comparator to prevent transients that could damage electrical components.**

**NOTE:** The following steps are the same for both the Transmitter and the Comparator, and should be performed to remove each unit.

1. Remove electrical power from the pedestal assembly.
2. Disconnect the cable assemblies.

**\*\*\*WARNING\*\*\***

**The Transmitter and the Comparator are separate units that weigh 45 pounds each and therefore require two people for lifting or moving, as noted in the following steps. DO NOT attempt to lift or move the unit by yourself, as this may result in injury.**

3. **(Requires two people.)** While supporting one end of the Transmitter or Comparator assembly, remove the three hexagon nuts, lockwashers, flat washers, and the mount bracket from mount plate assembly.
4. **(Requires two people.)** Slide the Transmitter or Comparator with the mount bracket and the mount plate assembly off the lift bar. If necessary disconnect cable connections.
5. Remove the two hexagon nuts, lockwashers, and flat washers from the mount plate assembly.
6. **(Requires two people.)** With one person on each side holding on to the unit, lift or slide the Transmitter or Comparator from the mount plate assembly and carefully lower it to the floor.
7. **(Requires two people.)** With one person on each side holding on to the unit, carry the Transmitter or Comparator down the UAIB stairs to the ground and carefully set it on the ground next to the steel drum.

8. Initiate the disposal procedure in accordance with Section F, paragraphs 7 and 8 (page 17).

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**THIS COMPLETES THE ART-1 RANGING UNIT TRANSMITTER AND  
COMPARATOR REMOVAL PROCEDURE.**

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## **F. PCB DISPOSAL PROCEDURES**

### **1. INTRODUCTION**

Tetra Tech EM Inc. (Tetra Tech) is supporting NOAA and the National Weather Service through a task order to transport and dispose of PCB-containing transformers and ranging units from multiple facilities across the nation. The use, transport, and disposal of PCBs are strictly regulated. This procedure instructs NOAA NWS facilities personnel in the proper packaging, labeling, pickup support, and storage of transformers and ranging units awaiting transport after removal from service.

### **2. PCB REGULATION SUMMARY**

The Toxic Substances Control Act (TSCA)—enacted in 1976—allowed the U.S. Environmental Protection Agency (EPA) to track industrial chemicals produced in or imported to the United States. TSCA is the primary statute governing the handling and disposal of PCBs. Regulations for TSCA are codified in Title 40 Code of Federal Regulations (CFR) Part 761. Title 40 CFR Part 761 includes regulations for transporting and disposing of PCB-containing transformers. The procedures described in this document support these regulations.

### **3. OPERATIONAL STATUS**

The NWS will disassemble the existing radiotheodolites within the UAIB domes and replace them with more technologically advanced systems. However, the PCB-containing transformers and ranging units will be removed within the next several months. Table 1 lists the PCB sites and affected equipment.

In anticipation of this disassembly, samples of dielectric fluid within the transformers and ranging units were analyzed and found to contain concentrations of PCBs greater than 500 parts per million (ppm). The dielectric fluid within each transformer and ranging unit weighs 4 to 8 pounds. The weights and dimensions of the PCB transformers and ranging units are presented in Table 3.

#### 4. COORDINATION AND SCHEDULING

Tetra Tech will coordinate disposal activities with the NWS on-site Meteorologist in Charge/Officer in Charge (or other designated person), the NOAA COTR, the NOAA Local Environmental/Safety Focal Point, the contracted transporter, and the disposal facility. The coordination and scheduling events for disposal activities are as follows:

- a. Prior to delivery and according to the scheduled dates in Table 1, Tetra Tech will coordinate the delivery of packing containers with the NWS on-site Meteorologist in Charge/Officer in Charge.
- b. Within 3 days after shipping, Tetra Tech will contact the NWS on-site Meteorologist in Charge/Officer in Charge to ensure all materials were received and confirm the pickup date.
- c. One day prior to the scheduled pickup date in Table 1 (approximately 2 weeks after delivery of the containers described in paragraph 5), Tetra Tech will contact the NWS on-site Meteorologist in Charge/Officer in Charge to confirm that the transformer and ranging units are ready for transport, if not notified by the NWS prior to that time.
- d. For remote sites, Tetra Tech will also call the Meteorologist in Charge/Officer in Charge when en route to the pickup. The transporter will pick up the packaged transformer and ranging unit approximately 1 week after being notified. NWS personnel will sign and date a manifest at the time of pickup.

#### 5. CONTAINER DELIVERY

Table 1 lists the schedule dates for Tetra Techs delivery and pickup of containers for each site. The shipping material packets and packing containers will be shipped to NWS sites in two separate shipments 2 weeks prior to the scheduled equipment pickup date. The on-site Meteorologist in Charge/Officer in Charge will direct Tetra Tech to deliver the drums to a location at the base of the UAIB and place them under the stairwell (or near the stairwell) to the roof. The shipping material packets will be delivered to the on-site Meteorologist in Charge/Officer in Charge.

#### 6. DISPOSAL MATERIALS PROVIDED

The packing containers are 55-gallon steel drums. The shipping material packet includes:

- Labels
- Gloves
- Plastic drop cloth (8' x 12')
- Four 3/8-inch by 16-inch by 20-inch absorbent pads (per container)
- Additional instructions from Tetra Tech

## 7. PACKAGING

Once the packing container and shipping material packets have been received, the transformer and ranging unit may be taken out of service. NWS staff will remove the PCB transformers and ranging units and install the NWS-supplied replacement counterweights. The scheduled date for picking up the PCB transformers and ranging units will be approximately 1 week after removal from service. After the transformer or ranging unit is removed from service, it must be packaged as follows:

- a. Remove the lid ring and the lid of the drum. (This requires a 15/16-inch socket wrench and a crescent wrench.)
- b. Place two of the absorbent pads in the bottom of the drum.
- c. **(Requires two people.)** With two people holding on to the equipment, carefully lower the transformer or ranging unit into the drum. Facilities with multiple units must carefully lower each unit into the same 55-gallon drum, one unit at a time. **(DO NOT** drop the unit into the drum.)
- d. Place two of the absorbent pads on top of the transformer or ranging unit.
- e. Replace the lid of the drum and the drum ring; tighten the drum ring. (This requires a 15/16-inch socket wrench and a crescent wrench.)

## 8. LABELING

After the transformers and ranging units have been sealed in the drum, the drum must be labeled. Three labels required for the identification, transportation, and disposal of PCBs have been included in the shipping material packet: a standard 6-inch by 6-inch PCBs label, a 4-inch by 4-inch hazard Class 9 label for transportation, and a 6-inch by 6-inch Waste for Disposal label. NOAA NWS personnel should enter the date the PCB item was removed from service (on the Date Placed in Storage line) with a permanent marker on the Waste for Disposal label. See Attachment B for examples of labels.

## 9. TEMPORARY STORAGE

Once the transformer or ranging unit has been properly packaged and labeled, if necessary, it must be moved to a location easily accessible for pickup by the transporter. Though suitable for storage outside, the drums should be shielded from the weather if possible. Use the following guidelines for temporarily storing drums that are awaiting pickup:

- a. Keep the drum out of the way of vehicle traffic.
- b. Place the drum in an area accessible only to NWS-authorized personnel.
- c. Place the drum in a paved area if possible.
- d. Store the drum away from storm or sewer drains and any surface-water bodies.

- e. Store the drum away from trash dumpsters or other trash pickup areas so it cannot be mistaken as trash.

If the drum requires temporary storage for more than 7 days, the NOAA NWS Environmental/Safety Focal Point must make periodic visual inspections of the container to determine if any damage has occurred. If damage to the transformer or ranging unit is severe, report the damage to the NOAA COTR (Mark George at 303-497-3064) and Tetra Tech (John Yerton at 303-441-7900).

#### 10. PICKUP, MANIFESTING, AND TRANSPORT

The scheduled date for picking up the PCB transformers and ranging units will be in accordance with the scheduled dates listed in Table 1. This task will be supported by a Tetra Tech subcontractor experienced in transportation and disposal of PCB-containing material.

- a. The NWS Meteorologist in Charge/Officer in Charge will call Tetra Tech when the material is ready for transport.
- b. A waste profile, generic PCB certification form, and completed manifest will accompany the transporter. The contracted transporter will also prepare all manifest papers for signature by the on-site NWS representative. A copy of the manifest will be provided to the NWS on-site Meteorologist in Charge/Officer in Charge at the time of pickup.
- c. The NWS representative is required to fill out Box 15 of the manifest with the date the transformer/ranging unit was taken out of service and place his or her printed name, signature, and date in Box 16. Attachment C provides an example of a Uniform Hazardous Waste manifest.
- d. Certification of receipt and disposal will be assigned at the Onyx Recycling facility. This certification includes additional manifesting information with a prescribed manifest and incineration date. At this time, the disposal subcontractor (Onyx) takes ownership of the waste.
- e. The NOAA COTR will receive a copy of the original manifest and a certificate of receipt and disposal indicating the waste material was received in Phoenix. The NOAA COTR will identify the date of incineration and the new manifest by which the material was shipped to the final destination.

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**THIS COMPLETES THE PCB DISPOSAL PROCEDURES.**

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**G. REPORTING INSTRUCTIONS FOR MODIFICATION COMPLETION**

Report the completed modification using the Engineering Management Reporting System (EMRS) according to the instructions in NWS Instruction 30-2104, Maintenance Documentation, Part 4, and Appendix H. Include the following information in the EMRS Report. A sample EMRS Report is provided as Attachment D.

<b>Block #</b>	<b>Block Type</b>	<b>Information</b>
5	Description	ART-2 Removal and Disposal of the Transformer Chassis Assembly and ART-1/2 Ranging Unit Transmitter/Comparator Systems
7	Equipment Code	ART-1 or ART-2
15	Comments	Removal and disposal of upper air equipment, IAW ART Mod Note 19A
17a	Mod. No.	19A

Mark S. Paese  
Director, Maintenance, Logistics, and Acquisition Division

Attachment A - Optical Theodolite Comparison Procedure  
Attachment B - Sample Labels Required for Containers With PCBs  
Attachment C - Sample Uniform Hazardous Waste Manifest  
Attachment D - Sample EMRS Report

<b>Table 1 Disposal Schedule for Sites With PCBs in Transformers and/or Ranging Units</b>					
Station	Ground Equipment	Drum Shipping Date	Recommended Date Unit To Be Taken Out of Service	Scheduled Pickup Date	Notes
<b>NWS SITES WITH PCBs IN TRANSFORMERS AND/OR RANGING UNITS - EASTERN REGION</b>					
Blacksburg, VA	ART-2	11-Aug-03	22-Aug-03	by: 5-Sept-03	Additional Ranging Unit
Caribou, ME	ART-2	11-Aug-03	22-Aug-03	by: 5-Sept-03	Additional Ranging Unit
Chatham, MA	ART-2	11-Aug-03	22-Aug-03	by: 5-Sept-03	Additional Ranging Unit
Portland (Gray), ME	ART-2	11-Aug-03	22-Aug-03	by: 5-Sept-03	
Greensboro, NC	ART-2	11-Aug-03	22-Aug-03	by: 5-Sept-03	
Pittsburgh, PA	ART-2	11-Aug-03	22-Aug-03	by: 5-Sept-03	
Sterling, VA - Operational	ART-2	11-Aug-03	22-Aug-03	by: 5-Sept-03	
Sterling, VA - Test	ART-2 ART-1	11-Aug-03	22-Aug-03	by: 5-Sept-03	Additional Ranging Unit Ranging Unit only
Morehead City, NC	ART-1	18-Aug-03	22-Aug-03	by: 5-Sept-03	Ranging Unit only
New York (Upton), NY	ART-2	11-Aug-03	22-Aug-03	by: 5-Sept-03	
<b>NWS SITES WITH PCBs IN TRANSFORMERS AND/OR RANGING UNITS - ALASKA</b>					
Anchorage, AK	ART-2	8-Aug-03	29-Aug-03	by: 5-Sept-03	
Annette, AK	ART-2	8-Aug-03	28-Aug-03	by: 5-Sept-03	
Barrow, AK	ART-2	8-Aug-03	9-Sept-03	by: MidSept-03	
Bethel, AK	ART-2	8-Aug-03	19-Sept-03	by: 30-Sept-03	
Cold Bay, AK	ART-2	8-Aug-03	2-Sept-03	by: MidSept-03	
Fairbanks, AK	ART-2	8-Aug-03	29-Aug-03	by: MidSept-03	
King Salmon, AK	ART-2	8-Aug-03	12-Sept-03	by: 30-Sept-03	
Kodiak, AK	ART-2	8-Aug-03	26-Sept-03	by: 6-Oct-03	
Kotzebue, AK	ART-2	8-Aug-03	19-Sept-03	by: 30-Sept-03	
McGrath, AK	ART-2	8-Aug-03	26-Sept-03	by: 6-Oct-03	
Nome, AK	ART-2	8-Aug-03	12-Sept-03	by: 30-Sept-03	
St. Paul Is., AK	ART-2	8-Aug-03	12-Sept-03	by: 30-Sept-03	
Yakutat, AK	ART-2	8-Aug-03	9-Sept-03	by: MidSept-03	
<b>NWS SITES WITH PCBs IN TRANSFORMERS AND/OR RANGING UNITS - CENTRAL REGION</b>					
Aberdeen, SD	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Bismark, ND	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	2 Additional Ranging Units for ART-2
Chanhassen, MN	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Denver, CO	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Dodge City, KS	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Gaylord, MI	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Grand Junction, CO	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	Additional Ranging Unit

<b>Table 1 Disposal Schedule for Sites With PCBs in Transformers and/or Ranging Units</b>					
<b>Station</b>	<b>Ground Equipment</b>	<b>Drum Shipping Date</b>	<b>Recommended Date Unit To Be Taken Out of Service</b>	<b>Scheduled Pickup Date</b>	<b>Notes</b>
Green Bay, WI	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Int'l Falls, MN	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Lincoln, IL	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
North Platte, NE	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Omaha, NE	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Davenport (Quad City), IA	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Rapid City, SD	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Riverton, WY	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Springfield, MO	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Topeka, KS	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
Detroit (White Lake), MI	ART-2	2-Sept-03	12-Sep-03	by: 26-Sept-03	
<b>NWS SITES WITH PCBs IN TRANSFORMERS AND/OR RANGING UNITS - SOUTHERN REGION</b>					
Albuquerque, NM	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Brownsville, TX	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Birmingham, AL	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Corpus Christi, TX	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Del Rio, TX	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
New Braunfels, TX <sup>1</sup>	No upper air	1-Oct-03	13-Oct-03	by: 24-Oct-03	ART-2 transformer
Santa Teresa, NM (El Paso, TX)	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Forth Worth, TX	ART-1	1-Oct-03	13-Oct-03	by: 24-Oct-03	Ranging Unit Only
Jackson, MS	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Jacksonville, FL	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Lake Charles, LA	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Nashville (Old Hickory), TN	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Norman, OK	ART-1	1-Oct-03	13-Oct-03	by: 24-Oct-03	Ranging Unit Only
North Little Rock, AR	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Miami, FL	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Midland, TX	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
Peachtree City, GA	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	
San Juan, PR	ART-2	1-Oct-03	13-Oct-03	by: 24-Oct-03	

<sup>1</sup>New Braunfels, TX maintains upper air site at Del Rio. Therefore, need 2 drums—one for Del Rio, one for New Braunfels. Supplies for New Braunfels and Del Rio will need to be sent to New Braunfels forecast office.

<b>Table 1 Disposal Schedule for Sites With PCBs in Transformers and/or Ranging Units</b>					
Station	Ground Equipment	Drum Shipping Date	Recommended Date Unit To Be Taken Out of Service	Scheduled Pickup Date	Notes
<b>NWS SITES WITH PCBs IN TRANSFORMERS AND/OR RANGING UNITS - WESTERN REGION</b>					
Boise, ID	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	
Elko, NV	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	
Flagstaff, AZ	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	Additional Ranging Unit
Glasgow, MT	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	
Great Falls, MT	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	
Medford, OR	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	
Oakland, CA	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	
Quillayute, WA	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	
Reno, NV	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	
Salem, OR	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	
Salt Lake City, UT	ART-2	20-Oct-03	05-Nov-03	by: 14-Nov-03	Additional Ranging Unit
Spokane, WA	ART-1	20-Oct-03	05-Nov-03	by: 14-Nov-03	2 ART-1 Ranging Units (4 small chassis)

**Ranging Unit Transmitter/Comparator.** The Ranging Unit Transmitter/Comparator will be removed from the following sites:

ART-2 sites:

- Bismark, North Dakota (2 ranging units)
- Grand Junction, Colorado
- Salt Lake City, Utah
- Flagstaff, Arizona
- Caribou, Maine
- Chatham, Massachusetts
- Sterling Research and Development Center, Sterling, Virginia
- Blacksburg, Virginia

ART-1 sites:

- Spokane, Washington (2 ranging units)
- Fort Worth, Texas
- Norman, Oklahoma
- Sterling Research and Development Center, Sterling, VA
- Morehead City, North Carolina

<b>Table 2</b>		
<b>NOAA NWS Site Environmental/Safety Focal Points</b>		
<b>WFO Environmental/ Safety Focal Point</b>	<b>WFO</b>	<b>E-Mail/ Phone Number</b>
<b>EASTERN REGION</b>		
Alan Dunham	WFO, Boston, MA	(508) 823-1983
William Desjardins	WFO Caribou, ME	(207) 496-0143
Arthur Lester	WFO Portland, ME	(207) 688-3224
John Newkirk	WFO Baltimore, MD/ Washington, DC	(703) 260-0105
Dean Covais	WFO New York City, NY	(631) 924-0494 x228
Alexander Dyga	WFO Pittsburgh, PA	(412) 262-1493 x227
Karl-Heinz Lenzen	WFO Raleigh/Durham, NC	(919) 515-8214 x255
William Riehl	WFO Roanoke, VA	(540) 552-1220 x228
Ronald Boyle	WFO Morehead City, NC	(252) 223-5007 x241
<b>SOUTHERN REGION</b>		
Patrick Chando	WFO Albuquerque, NM	(505) 244-9146
Gregory Machala	WFO Birmingham, AL	Greg.Machala@noaa.gov (205) 621-5650
Paul Rogers	WFO Brownsville, TX	(956) 504-3184
Tom Dever	WFO Corpus Christi, TX	(361) 289-0959
Patrick McDonald	WFO New Braunfels, TX	(830) 606-3617
Robert McFall	WFO El Paso, TX	(505) 589-4088 x260
Patrick McDonald	WFO Austin/San Antonio, TX	(830) 606-3600
James Blair	WFO Atlanta, GA	James.Blair@noaa.gov (770) 486-1133
Tommy Kircher	WFO Dallas/Fort Worth, TX	Tom.Kircher@noaa.gov (817) 831-1157 x283
J Winger	WFO Jackson, MS	Jl.Winger@noaa.gov (601) 939-2786
Bob Kerns	WFO Jacksonville, FL	(904) 741-4370
Carl Hughes	WFO Lake Charles, LA	(337) 477-9023
Edward Pasierb	WFO Little Rock, AR	(501) 834-3955
Susan Griffin	WFO Midland/Odessa, TX	(915) 563-5006
Neal Lynch	WFO Miami, FL	(305) 229-4507

<b>Table 2 NOAA NWS Site Environmental/Safety Focal Points</b>		
<b>WFO Environmental/ Safety Focal Point</b>	<b>WFO</b>	<b>E-Mail/ Phone Number</b>
Ralph Troutman	WFO Nashville, TN	(615) 754-4634 x225
William Nardi	WFO Oklahoma City, OK	(405) 366-6583
Jose Estrada	WFO San Juan, PR	Jose.A.Estrada@noaa.gov (787) 253-4586 x109
<b>CENTRAL REGION</b>		
Timothy Kearns	WFO Aberdeen, SD	Timothy.Kearns@noaa.gov (605) 225-0519
Odell Prince	WFO North Central Lower Michigan, MI	(517) 731-3384 x381
Leonard Peterson	WFO Bismarck, ND	(701) 250-4495
Byron Louis	WFO Denver/Boulder, CO	(303) 361-0661
Larry Noller	WFO Dodge City, KS	316) 227-7140
Steve Wannebo	WFO Duluth, MN	steven.wannebo@noaa.gov (218) 729-0651 x605
David Paschal	WFO Detroit, MI	david.paschal@noaa.gov (248) 625-3309 x381
Theodore Stimach	WFO Quad Cities, IA	(563) 388-0672
James Daniels	WFO Grand Junction, CO	(970) 243-7007
Kolly Mars	WFO Green Bay, WI	kolly.mars@noaa.gov (920) 497-8941
Billy Ousley	WFO Central Illinois, IL	(217) 732-4029 x327
Ernest Vasina	WFO North Platte, NE	(308) 532-4936 x381
Bruce Aslesen	WFO Minneapolis, MN	(952) 361-6670
Lawrence Howard	WFO Omaha, NE	larry.howard@noaa.gov (402) 359-5166 x381
Randall Ravasio	WFO Riverton, WY	(307) 857-3898
Lawrence Dooley	WFO Springfield, MO	(417) 864-8535
Terry Posten	WFO Topeka, KS	(785) 232-1493 x381
Robert (Pat) Baye	WFO Rapid City, SD	(605) 341-9271

<b>Table 2 NOAA NWS Site Environmental/Safety Focal Points</b>		
<b>WFO Environmental/ Safety Focal Point</b>	<b>WFO</b>	<b>E-Mail/ Phone Number</b>
<b>WESTERN REGION</b>		
Michael Pereira	WFO Boise, ID	(208) 334-9865
Donald (Donnie) King	WFO Flagstaff, AZ	(520) 556-9161 x261
Lyndall (Mark) Siverly	WFO Glasgow, MT	(406) 228-2850
James Moore	WFO Elko, NV	James.R.Moore@noaa.gov (775) 778-6716
Roger Gerig	WFO Medford, OR	(541) 776-4303
Irwin (Irv) Haynes	WFO Spokane, WA	(509) 244-0110
Brian Alley	WFO Portland, OR	(503) 326-2340 x263
Mike Freitas	WFO Reno, NV	(775) 673-8100
Les Libby	WFO Seattle/Tacoma, WA	Les.Libby@noaa.gov (206) 526-6090 x264
Steven Summy	WFO Salt Lake City, UT	(801) 524-5154
Michael Bequette	WFO Sacramento, CA	(916) 979-3041 x265
Doug Sherrick	WFO Great Falls, MT	406-453-9957 ext 260
<b>ALASKA REGION</b>		
Gary Ennen, Officer in Charge	WSO Kodiak, AK	Gary.Ennen@noaa.gov (907) 487-2102
Paul Rumbo	WFO Anchorage, AK	Paul.Rumbo@noaa.gov (907) 266-5128
Randy Davis	WFO Fairbanks, AK	(907) 458-3715
Kimberly Custer	WFO Juneau, AK	(907) 790-6812
Ralph Morgan III, Officer in Charge	WSO King Salmon, AK	Ralph.Morgan@noaa.gov (907) 246-3303
Charles Wilson, Officer in Charge	WSO Annette, AK	Charles.Wilson@noaa.gov (907) 886-3241
Harold (Pete) Garrison, Officer in Charge	WSO Bethel, AK	Pete.Garrison@noaa.gov (907) 543-2236
Jerry Painter, Officer in Charge	WSO Barrow, AK	jerry.painter@noaa.gov (907) 852-6484
Craig Eckert, Officer in Charge	WSO Cold Bay, AK	Craig.Eckert@noaa.gov (907) 532-2448
Mike Watkins, Officer in Charge	WSO McGrath, AK	Michael.Watkins@noaa.gov (907) 524-3205

<b>WFO Environmental/ Safety Focal Point</b>	<b>WFO</b>	<b>E-Mail/ Phone Number</b>
Jerry Steiger, Meteorologist in Charge	WSO Nome, AK	Jerry.Steiger@noaa.gov (907) 443-2321
David Anderson, Officer in Charge	WSO Kotzebue, AK	Dave.Anderson@noaa.gov (907) 442-3231
Richard Blizzard, Officer in Charge	WSO St. Paul Island, AK	Richard.A.Blizzard@noaa.gov (907) 546-2215
Jack Endicott, Officer in Charge	WSO Yakutat, AK	Jack.Endicott@noaa.gov (907) 784-3322

<b>Equipment</b>	<b>Quantity</b>	<b>Height (in.)</b>	<b>Depth (in.)</b>	<b>Length (in.)</b>	<b>Weight (lbs)</b>
ART-1 Ranging Unit (two units):					
403 MHz Transmitter	7	11	11	20	45
Phase Comparator	7	11	11	20	45
ART-2 Ranging Unit Transmitter/Comparator	9	11	20	19	95
ART-2 Transformer Chassis Assembly	67	12.8	11.9	8	82

**ATTACHMENT A - Optical Theodolite Comparison Procedure**

*Excerpted from NWS Observing Handbook (WSOH) 10,  
Section 11.3.4, Rawinsonde Observations*

**1. Purpose of Taking Optical Theodolite Comparisons**

An Optical comparison shall be performed after a modification to the ART that could change the system tracking stability. Optical comparisons are taken to ensure the radiosonde tracking equipment is operating properly and tracking smoothly.

**2. Procedures for Taking an Optical Comparison**

Optical theodolite readings are taken from a location within normally 125 feet from where the RDF tracking equipment is located. The theodolite must be orientated using a minimum of two surveyed points within 400 feet of the theodolite. The theodolite must be level and properly oriented. Procedures for leveling and orienting the theodolite should be followed using the instructions in FMH-3, chapter 6, page 6-6.

It is best to do the comparison on a clear day with some wind. Days with strong winds which may cause limiting angles and days with light winds that may cause elevation angles above 60 degrees should be avoided.

The pibal timer should be started when the release is initiated. It is extremely important that it is synchronized with the time of release. The optical readings will be compared to the readings automatically recorded each minute as entered by the MicroART software when tracking the balloon. The timer buzzer will sound 10 seconds prior to each minute. This 10-second warning is provided to alert the observer to get the balloon in the theodolite's cross hairs and be prepared to take an accurate reading at the next sounding of the buzzer.

The observer should attempt to lock-on to the balloon as early as possible using the sights mounted on top of the telescope and enter the angular readings on the WS Form B-17. Readings will not be used for the first 10 minutes of the flight due to rapid changes in the angular readings. Conditions for reliable readings must have elevation angles above the limiting angles and less than 60 degrees.

Readings used in the computation will not begin until the eleventh minute after release. Readings should be taken for at least 30 minutes from that time. Azimuth angles should be read every minute, but compared only every 5 minutes. The emphasis of the comparison is on elevation angles. The elevation angles should be read and compared every minute. The WS Form B-17 should have the optical theodolite readings entered and have the differences noted with the radiosonde tracking equipment's readings.

- a. Differences in azimuth readings will be entered every 5 minutes in column 3, subtracting the rawinsonde tracking equipment readings from the theodolite's readings.

- b. Differences in the elevation readings will be entered each minute in column 5. These readings will be made by subtracting the ground tracking equipment readings from those taken with the theodolite.
- c. Minute-to-minute changes will be entered in column 6. These readings will begin with subtracting the elevation difference recorded in column 5 starting at minute 11 from minute 12's elevation difference. This process of subtracting the previous minute's angular readings from the next indicates the smoothness of the tracking.
- d. Column 7 is the square of the entries in column 6. These entries are tabulated for all minutes that have elevation readings between the limiting angles and 60 degrees. These readings when added together and divided by the number of entries in column 7 provide an average change. The observer shall then go to the "Table of Average Root Mean Squares" and locate the appropriate column that contains the average change. The average RMS value is shown to the right and should be placed in column c.

### 3. Reporting RMS Values and Corrective Action

The RMS values shall be reported on the next WS Form B-29 in the blocks labeled Rawin-Rabal Comparison. The latest RMS value along with the date of accomplishment should be entered. The following actions will be taken if RMS values fall within a given value.

- a. Whenever the RMS value is 0.050 or less:

The electronics technician shall examine the forms to determine the need for maintenance, and initial the forms after which they will be forwarded to the regional headquarters with the current WS Form B-29.

If the electronics technician is expected to be absent from the station for more than 7 days, the forms will be forwarded without initials to the regional headquarters with the current WS Form B-29.

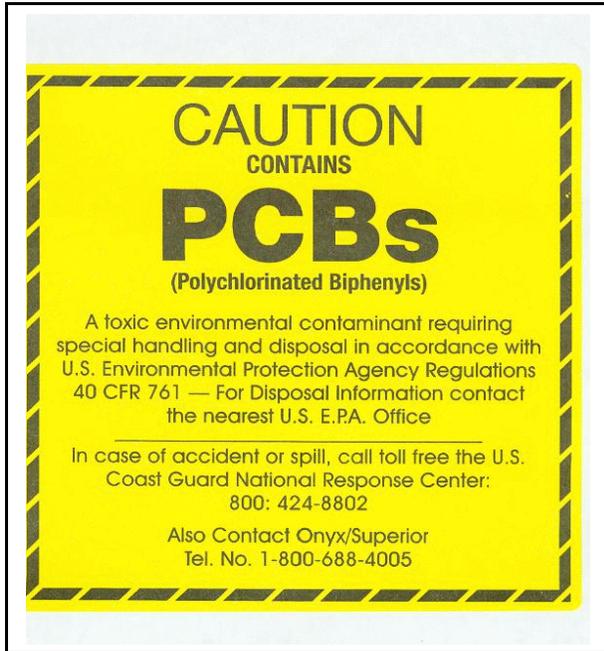
- b. Whenever the RMS value is greater than 0.050, hold the forms at the station until corrective action has been taken. After the action is completed, send the forms to the regional headquarters with the current WS Form B-29. If the RMS is between 0.050 and 0.080 and the station electronics technician is unable to complete corrective action within ten days, that fact, together with the reason for the delay, will be reported by email to the regional headquarters with a copy of the email placed in the station's maintenance records.
- c. Whenever the RMS value exceeds 0.080, emergency maintenance is required. If the station electronics technician is unable to take immediate corrective action to reduce the RMS to less than 0.050, the regional headquarters shall be notified.

**4. Disposition of the WS Form B-17**

Copies of the WS Form B-17 shall be sent to the regional headquarters. If corrective action is required, the form should not be sent until the correction has been made. A copy of the WS Form B-17 shall remain on station a minimum of 2 years. This form along with other upper-air documentation will be reviewed during upper-air site inspections from regional and national headquarters personnel.

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ATTACHMENT B - Sample Labels Required for Containers With PCBs

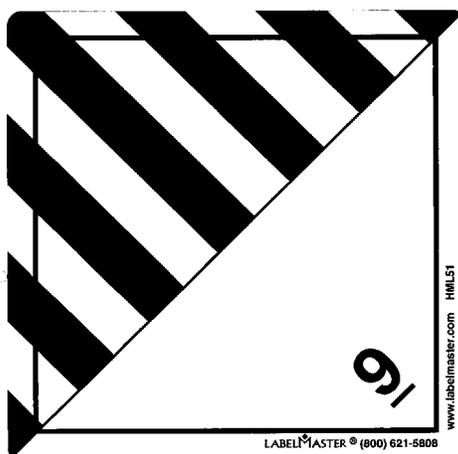


PCBs Label



Waste for Disposal Label

**Note:** Arrows indicate fields where NOAA NWS personnel are required to provide information regarding when the transformer and ranging units were packaged for transport.



Class 9 Label for PCB Transportation

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**ATTACHMENT C - Sample Uniform Hazardous Waste Manifest**

Form Approved: OMB No. 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address			A. State Manifest Document Number			
4. Generator's Phone ( )			B. State Generator's ID			
5. Transporter 1 Company Name <i>Onyx Special Services</i>		6. US EPA ID Number <i>WID 988566543</i>	C. State Transporter's ID			
7. Transporter 2 Company Name		8. US EPA ID Number	D. Transporter's Phone <i>602-233-2955</i>			
9. Designated Facility Name and Site Address <i>Onyx Special Services 5752 W. Jefferson St Phoenix AZ 85043</i>		10. US EPA ID Number <i>AZ0000337360</i>	E. State Transporter's ID			
			F. Transporter's Phone			
			G. State Facility's ID			
			H. Facility's Phone <i>602-233-2955</i>			
GENERATOR	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
	a. <i>RQ, Polychlorinated biphenyl, liquid, 9, UN2315, PG III</i>				<i>P</i>	
	b.					
	c.					
	d.					
J. Additional Descriptions for Materials Listed Above <i>Profile#</i>			K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information <i>Emergency Contact #1-800-688-4005</i> <i>Out of Service Date: DOT ERG #171</i>						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name		Signature			Month Day Year	
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials					
	Printed/Typed Name		Signature			Month Day Year
	18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature			Month Day Year	
19. Discrepancy Indication Space						
FACILITY	20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
	Printed/Typed Name		Signature			Month Day Year

Style F15 LABELMASTER® (800) 621-5909 www.labelmaster.com EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

ORIGINAL-RETURN TO GENERATOR

**Note:** Arrows indicate fields where NOAA NWS personnel are required to provide information.

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ATTACHMENT D - Sample EMRS Report

A26 Detail Form - ESCM2, SILVER SPRING, MD :: EMRS ANALYST - Microsoft Internet Explorer

**GENERAL INFORMATION**

NEW RECORD      WFO\* PBZ      Document No.\* PBZ30730000

1. Open Date: 07/29/2003    Open Time: 08:00    2. Op Initials: WSH    3. Response Priority:  Immediate  Low  Routine  Not Applicable    4. Close Date: 07/29/2003    Close Time: 13:00

5. Maintenance Description: 383 characters left      UPPER AIR  
 ART-2 Removal and Disposal of the Transformer Chassis Assembly and ART1/2 Ranging Unit Transmitter/Comparator systems

**EQUIPMENT INFORMATION**

6. Station ID\* PBZ    7. Equipment Code ART2    8. Serial Number 068    9. TM M    10. AT M    11. How Mal 999

Alert:      Time Remaining: 5:00  
 (For Block 12 use only)

**12. EQUIPMENT OPERATIONAL STATUS TIMES**

a. Fully Operational		Partially Operational				Not Operational			
		b. Logistic Delay		c. All Other		d. Logistic Delay		e. All Other	
Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes

**13. PARTS USAGE and CONFIGURATION MANAGEMENT REPORTING**

ASN	Vendor Part No. (New Part)	Serial Number (Old Part)	Serial Number (New Part)	
				New Row
				Delete Row

**14. WORKLOAD INFORMATION**

a. Routine		b. Non-Routine		c. Travel		d. Misc		e. Overtime	
Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes
						5	0		

**MISCELLANEOUS INFORMATION**

15. Maintenance Comments: 682 characters left  
 Removal and disposal of Upper Air equipment, I.A.W. ART Mod Note 19.

16. Tech Initials: ALB

**17. SPECIAL PURPOSE REPORTING INFORMATION**

a. Mod No. 19    b. Mod Act/Deact Date 07/29/2003    c. Block C    d. Trouble Ticket No.    e. Block E

Commit A26    Place on Hold    Copy A26    New A26    Cancel

Done      Internet

