



WICC II Work Instruction

DIRECTIVE NO. WICCII-SOW-08.HW7C.007493
EFFECTIVE DATE: 7/22/2019
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Responsible Office: LJT/WICCII/Environmental Office

Title: Hazardous Waste: Polychlorinated Biphenyls (PCB) Management

PREFACE

P.1 PURPOSE

The purpose of this Work Instruction (WI) is to establish the procedures for the handling and storage of polychlorinated biphenyl (PCB) waste. PCB waste is handled similar to hazardous waste (HW), but is regulated under the Toxic Substances Control Act (TSCA). PCB materials whose concentration is unknown are assumed greater than 500 parts per million (ppm) until proven otherwise. Oil samples are collected for analysis to verify PCB levels. Oil, transformers, and other PCB containing materials with greater than 50 ppm are dated and stored temporarily until disposal, which occurs **within 9 months** from the "placed in storage date."

P.2 APPLICABILITY

This WI applies to environmental management services performed by the WICC Environmental Office at NASA Goddard Space Flight Center's Wallops Flight Facility (WFF), Wallops Island, Virginia.

P.3 REFERENCES

- 40 Code of Federal Regulations (CFR) Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
- Goddard Procedural Requirement (GPR) 8500.3, Waste Management

P.4 CANCELLATION

P.5 TOOLS, EQUIPMENT, AND MATERIALS

- Personal protective equipment (PPE; Level D recommended).
- Bung wrench
- Drum cart
- Absorbent pads
- Labels: HW and PCB
- Permanent black marker
- Oil-absorbent pads
- Tool box
- CLOR-N-OIL® PCB Screening kit

P.6 SAFETY PRECAUTIONS AND WARNINGS

- Wear appropriate PPE.

TO VERIFY THIS IS THE CORRECT VERSION, CHECK THE WICCII WIIMS SYSTEM AT
<https://wiims.wff.nasa.gov/WIIMSportal/portal-II.jsp> PRIOR TO USE.

- Follow Hazardous Waste Management Job Hazard Analysis.
- Technicians performing these tasks should be HAZWOPER certified in accordance with 29CFR1910.120.
- Implement lockout/tag out as necessary.
- Read container labels/Safety Data Sheets (SDS).
- Segregate incompatible waste.
- Open waste containers SLOWLY.
- Transport only securely CLOSED waste containers.
- Observe proper lifting/loading positions.
- Practice the "buddy system" (Do not work alone).
- Carry communication device for weather alerts and emergency communication.

P.7 TRAINING

- HAZCOM
- HAZWOPER

P.8 RECORDS

Record Title	Record Custodian	Retention
GSFC 23-54 (05/2018) HAZARDOUS WASTE DISPOSAL INVENTORY	NASA WFF Medical and Environmental Management Division (MEMD)	Handle as permanent pending retention approval.
CHAIN-OF-CUSTODY FORM	MEMD	Handle as permanent pending retention approval.
PCB storage logbook	MEMD	Handle as permanent pending retention approval.

* *NRRS – NASA Records Retention Schedule ([NPR 1441.1](#))*

P.9 MEASUREMENT/VERIFICATION

INSTRUCTIONS

In this document, a requirement is identified by “shall,” a good practice by “should,” permission by “may” or “can,” expectation by “will,” and descriptive material by “is.”

1. Coordinate the acquisition of sampling equipment, supplies, and shipping document with the NASA point of contact.

2. Make necessary arrangements (time and date of collection, limited access areas, etc.).
3. Prepare sample bottles, labels, cooler with refrigerant packs, sampling pipettes, etc.
4. Prepare a Chain-of-Custody Record form.
5. Bring sampling equipment, custody record, cooler, and refrigerant packs to sampling site.
6. Assign a unique number to each transformer. Copy serial number from transformer nameplate. Combine these numbers to identify samples (Ex. 12F1612345: 12th transformer to be sampled, F16 is the sampling site, 12345 is the serial number).

CAUTION: If sampling an active transformer, the safety office shall prepare a Health & Safety Plan, including lock out/tag out procedures, prior to any sampling.

7. Wearing appropriate PPE, look for an access point (such as a drain valve or a lid) to sample oil. Vent pressure before opening transformer lid **SLOWLY**. If transformer is vapor-locked, look for a plug near the top of transformer. Open slowly to vent pressure. Make sure the drain valve is closed prior to venting.
8. Collect sample into 40-milliliter bottles. To avoid possible contamination, do not reuse pipettes to draw oil. Wipe bottles, close lids tightly, and label bottles. Write what kind of sample (e.g., oil), date and time sample was taken, and initial label. Put samples into cooler with refrigerant pack.
9. Close the transformer after sampling. Wipe any traces of oil with absorbent pad. Discard pads and all sampling equipment used in an open head 55-gallon drum. Close drum and label as PCB material.
10. Record samples in the chain-of-custody form.
11. Using a CLOR-N-OIL® PCB Screening Kit, test oil twice to determine presence PCBs or send the samples and chain-of-custody form to an off-site laboratory for analyses of PCB concentration.
12. Interpret the results of the analysis and determine the appropriate management action.

STORAGE AND DISPOSAL PROCEDURE

13. If analysis indicates the sample has <50 ppm PCBs, drain and pump oil into DOT 17E 55 gallon drums (closed head). Transport the oil to the Accumulation Area for recycling. Relocate and relinquish empty transformer to salvage as scrap metal. Discard sampling debris as Non-Regulated Waste.
14. If analysis indicates the sample has >50 ppm PCBs, label transformer and drum of debris (e.g. used sampling equipment, gloves, Tyvek suits) with a PCB sticker with the words "CAUTION:

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CONTAINS PCBs". Complete the "Generator Information" section on a HW label, but remove the words "Hazardous Waste" from the label before applying to transformer or drum (PCBs are not regulated as HW, but Generator Information is required). Using a permanent marker, write the following on the transformer and drum of debris: assigned unique number, PCB level, and date of analysis. Relocate the transformer and drums into a PCB storage area. Record transformer and PCB contaminated materials in PCB storage logbook.

15. Maintain PCB logbook to track the storage and disposal of the PCB materials. Perform weekly inspections on PCB storage areas and document using the Accumulation Area inspection logs.
16. Within 3 months from the "placed in storage date", or as requested, arrangements must be made to dispose of all PCB materials. Regulations require PCB wastes be disposed of within 9 months of the "placed in storage date."

RESPONSIBILITIES

1. Supervisors shall:
 - a. Provide this work instruction to all employees prior to their encountering the subject activity and ensure that these steps are followed by periodic audit, testing, or retraining.
 - b. Revise this work instructions as practices or requirements change and prior to the expiration date.
2. Employees shall:
 - a. Follow safety precautions, warnings and instructions as described above.
 - b. Notify their supervisor when they become aware of changes in practice or regulation which requires an update to this work instruction.

Appendix A – Definitions

- GSFC 23-54 (05/2018) HAZARDOUS WASTE DISPOSAL INVENTORY: This form must be completed by the generator and received by the Environmental Office before waste is collected for disposal.

Appendix B – Acronyms

N/A

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CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
A		Initial Release
B**	7/19/2018	P.6 Changed radio to communication device
C	7/22/2019	Changed 23-54 (06/2014) to 23-54 (05/2018)

***subsequent revisions will be alphabetical beginning with B. If this is the baseline version, leave this and the remaining revision blocks blank*