

As part of the permit renewal process Clean Harbor will not seek renewal of TSCA storage authorization for an area known as Containment Bay E. As such, upon approval from EPA, the area will be closed in accordance with the information detailed in this section and with applicable TSCA standards.

### **Unit Description**

Containment Bay E consist of a 9.5 Feet X 20 Feet sealed concrete area with a containment berm height of 6 inches. Inside this area, a metal intermodal container (approximately 8 Feet X 18 Feet) was utilized for the storage of closed TSCA containers. It should be noted that; although the container is metal it contains a raised wooden floor. Since this floor is a porous surface and decontamination would be impossible (if any exist); therefore it will be removed prior to closure sampling and disposed as TSCA contaminated debris.

Note: although the unit is permitted for TSCA storage, it has not been utilized for that purpose for many years.

### **Characterization Sampling**

- Disposal of the current wood floor - For this purpose of this closure Clean Harbors will assume a worst case scenario and assume that the wood floor contains PCBs at levels equal to or greater 50 ppm. It will therefore be disposed as TSCA contaminated debris.
- Core sampling (porous areas) – Clean Harbors will collect five (5) core samples around the perimeter of the intermodal container to determine the presence of PCBs within the containment system (see Figure 1). To collect these samples the existing epoxy coating will be removed and core samples will be collected at depth of up to 1.25cm and a diameter of 2 to 3 cm. in accordance with the following guidance document for collecting core samples:  
<http://www.epa.gov/region1/cleanup/pcbs/pdfs/484692.pdf>.
- Wipe sampling (non-porous areas) – in accordance with the requirements outlined in 40 CFR 761, subpart P; nine (79) wipe samples will be taken from locations of the involving the intermodal container (see Figure 1) as follows:
  - 4– evenly spaced for floor of container (after wooden floor has been removed);
  - 1 - Inside left wall;
  - 1 - Inside left rear wall;
  - 1 - Outside middle column;
  - 1 - Inside right rear wall;
  - 1 - Inside right wall
- Samples outside the permitted unit:

- In addition to the samples described above, two (2) randomly placed wipe samples will be collected towards the entrance of the unit to verify that PCBs are not present at surface concentrations greater than  $2 \mu\text{g} / 100 \text{ cm}^2$ .

All samples collected will be analyzed using EPA SW-846 Method 8082 or the current equivalent method. Samples will be analyzed upon receipt so the proper decision can be made regarding any additional decontamination activities. In that regard, holding times for the samples will not be an issue since PCBs very stable and holding times are up to one year.

All samples will be sent to a third party lab for analysis.

**Note: See section 4.3 of the permit application for further discussion on safety plan, sampling, sampling equipment, decontamination, and sample management.**

### **Cleanup levels**

The facility will pursue cleanup standards designated for High Occupancy Areas for the closure of this unit. A High occupancy area means any area where PCB remediation waste has been disposed of on-site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is: 840 hours or more (an average of 16.8 hours or more per week) for non-porous surfaces and 335 hours or more (an average of 6.7 hours or more per week) for bulk PCB remediation waste. Examples could include a residence, school, day care center, sleeping quarters, a single or multiple occupancy 40 hours per week work station, a school class room, a cafeteria in an industrial facility, a control room, and a work station at an assembly line.

As such, the cleanup level for closure of Containment Bay E for PCB Aroclors, will be less than or equal to  $1 \text{ mg/kg}$  for porous surfaces or  $10\mu\text{g}/100\text{cm}^2$  for non-porous surfaces.

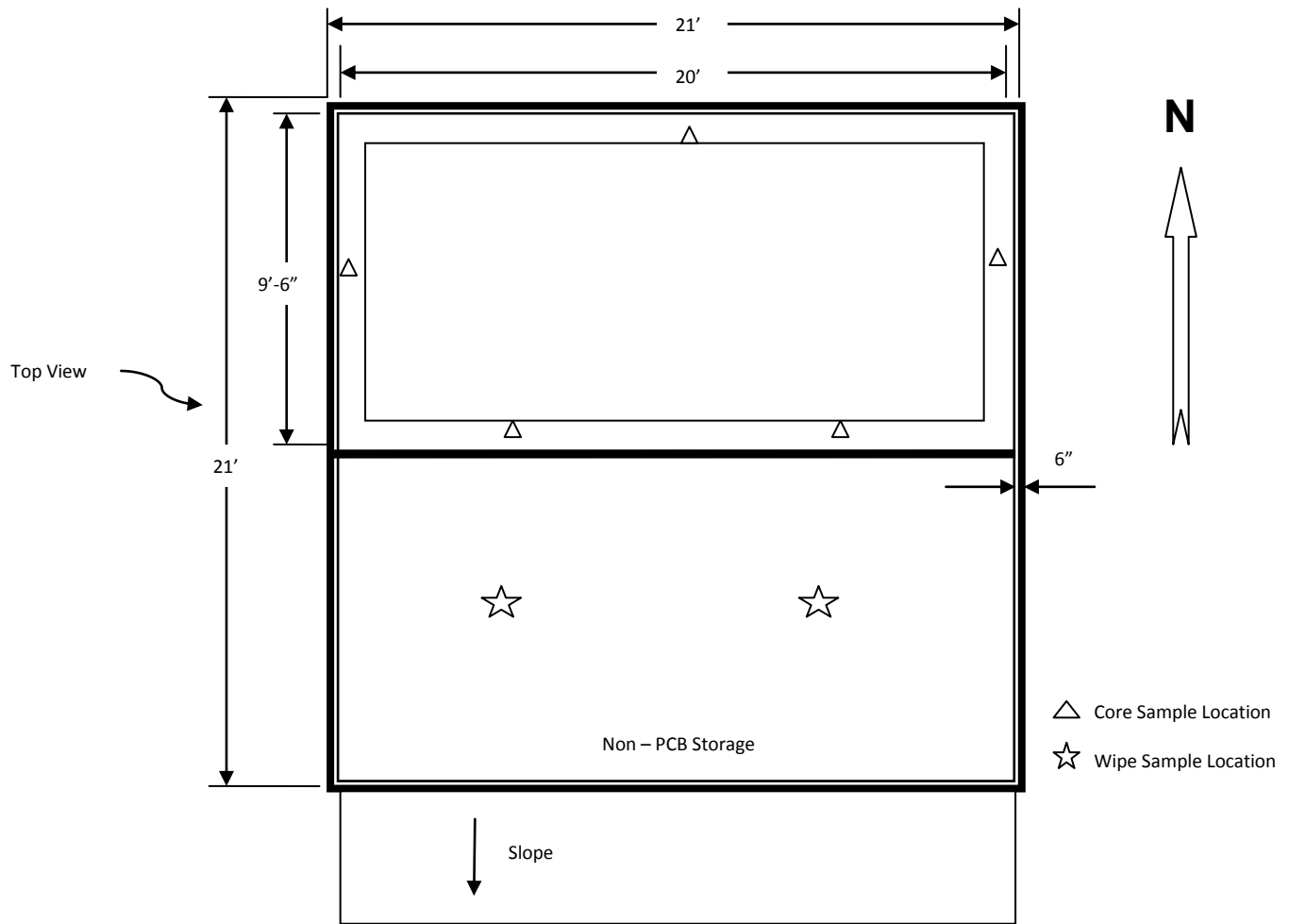
### **QA/QC Procedures**

Certified data received from the laboratory will be evaluated and validated by the Project Manager with regard to sample integrity and concentrations. Samples that are at or above the clean-up levels ( $> 1 \text{ mg/kg}$  for porous surfaces or  $10\mu\text{g}/100\text{cm}^2$  for non-porous surfaces), described in Table 4-4 of the permit application, will be noted and the corresponding areas, where the samples were taken, will be identified and designated for further decontamination and sampling in accordance with section 4.3.4. of the permit application

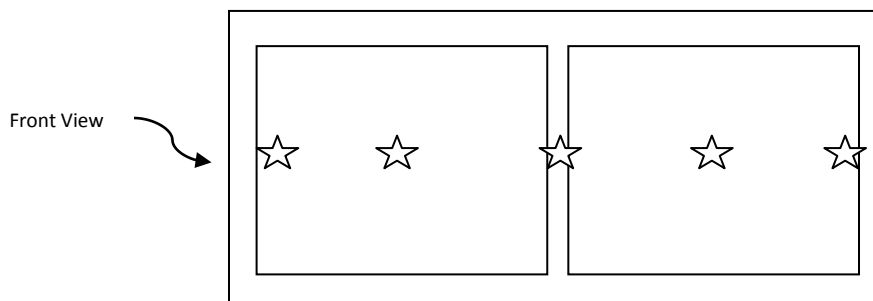
It is anticipated that data from certain samples may not be usable (e.g. lost samples, broken bottles, instrument failure, lab mistakes, etc.). In that event the data set will be evaluated to ensure that a minimum of 90% of the data is complete so that determinations of contaminants can be evaluated. Based on this criterion, the Project Manager will then decide if additional samples are warranted.

Additionally, the lab utilized will meet the following requirements:

- Surrogate recoveries must be between 50% and 150%
- Must use two surrogates – DCB and TCMX
- Laboratory control sample analyte recovery must be between 50% and 150%
- Reporting limit must be below 0.25 mg/kg for core samples, and below 1 µg/100 cm<sup>2</sup> for wipe samples
- All solid sample results must be reported by Dry weight
- Use TSCA-specified extraction methods 3550C or 3540C (Soxhlet is preferred)



PCB Storage Container



Wipe samples (left to right):

- Inside left wall;
- Inside left rear wall;
- Outside middle column;
- Inside right rear wall;
- Inside right wall

**Figure 1**

## **Decontamination**

After all the data has been validated, and the areas of PCB contamination above cleanup levels have been identified, cleanup of this area can be initiated. Cleanup methods listed below will be selected for the various items to be decontaminated. Areas that will potentially need to be decontaminated may include intermodal container and containment system.

For the containment area, a grid system for determining initial sampling points will be utilized in the event that the containment system is contaminated; a one grid square (half-way between the contaminated sample location, and the next 'clean' sampling point'), as specified in 40 CFR 761, Subpart O (40 CFR 761.283(d)) will be utilized, for the purpose of decontamination, if contaminants are found above the action level (see Figure 2).

**Note: in the event of contamination in the containment system it will be necessary to remove the intermodal container prior to re-sampling.**

Items to be discussed in this section include:

- Evaluation of Cleanup Methods.
- Description of Selected Cleanup Methods
- Decontamination of Cleanup Equipment
- Health and Safety Considerations
- Disposal of Cleanup Derived Waste

## **Evaluation of Cleanup Methods**

Currently, there are several methods in use for cleanup of PCBs. For porous surfaces, such as concrete, contamination will be removed by scarification (if the contaminate is localized to the surface area or by cutting and removal of the concrete if contamination has shown penetration. For non-porous surfaces (e.g. the intermodal container), the solvent clean method and various proprietary aqueous solvent or foam methods.

- **Scarification/Cutting and Removal**

For porous surfaces the facility will concentrate on removal of contaminants. Since these areas have been coated (and maintained) with epoxy it is anticipated that there is a low likelihood of contamination. However, if contamination is discovered the entire area will be decontaminated via scarification. If gaps or cracks are discovered the cleanup coordinator may alternately select cutting and removal of the affected concrete followed by verification sampling of the underlying material.

Equipment and support facilities needed for the Scarification/Cutting process are a Scarifier and Concrete saw. Additionally, rags, solvents, wire brushes, buckets, pumps,

and other small items will be used to decontaminate scarification unit using the solvent clean method described below.

- **Solvent Clean Method**

If any wipe sample within the metal container is found to be above the action level, the entire surface (i.e. the entire floor or sidewall) will be decontaminated using the Solvent Clean method.

This method can be used to decontaminate both exposed surfaces and PCB containers as specified in 40 CFR 761.79. Acceptable solvents include, but are not limited to, isopropyl alcohol, kerosene, hexane and #2 diesel fuel. For exposed surfaces, sufficient volume of solvent is applied to cover the entire contaminated surface, the excess solvent is absorbed with rags, and the contaminated area is wiped with a clean rag. If the surface is porous, scrubbing may be required using a wire brush. The process is then repeated and all solvent is absorbed with rags and granular absorbent.

The Solvent Clean Method is the most common cleanup method for PCBs. This method has been proven to be effective on most types of materials. It does not work as well on porous surfaces because the solvent tends to increase the mobility of the PCBs and allow them to penetrate further into the porous surface.

Equipment and support facilities needed for the solvent clean method are minimal. The only equipment needed is: rags, solvents, wire brushes, buckets, pumps, and other small items.

The solvent clean method is a simple procedure to implement and should not require any special time requirements. Since this method involves the use of flammable solvents, special precautions would need to be taken to prevent ignition of the solvents.

The relative cost of the Solvent Clean Method is expected to be low. As mentioned previously, this method does not involve any sophisticated equipment, so the main costs will be for labor, solvent, rags, and other miscellaneous equipment.

- **Health and Safety Considerations**

Persons performing closure operations will be trained in proper chemical handling and safety procedures. They will be under the direct supervision of persons who are familiar with the process and understand the hazard potential of the stored material. Management will oversee closure, will be familiar with this closure plan, and will ensure that all closure personnel are properly trained to safely perform the cleaning operation. The supervisor will have health and safety training provided through Clean Harbors' corporate health and safety program.

During the cleaning process, personnel will be equipped with the appropriate protective equipment. They will also utilize head protection and chemical resistant gloves and boots. The clothing will be designed so that both sleeves and pant legs can be taped at

the wrists and ankles respectively, to protect against upward or inward splash of water during cleaning.

Additionally, when utilizing scarification or cutting equipment of concrete, personnel will wear respirators and the area will be wetted with water to minimize dust generation.

Additional health and safety considerations during the cleanup of the facility are further addressed in Appendix H of the permit application.

- **Disposal of Cleanup Derived Waste**

Waste material generated during the PCB closure activities will fall into the two categories of contaminated and non-contaminated. Contaminated material will include liquid waste from the solvent clean process, miscellaneous sampling equipment, personnel protective equipment, and other items. These items will be segregated into liquids and solids and stored in 55-gallon drums. Both liquids and solids will be transported, in accordance with applicable regulatory requirements, to an approved disposal facility.

Non-contaminated material generated during closure activities will be disposed of at the local sanitary landfill.

### **Post Cleanup Verification Procedures**

In order to verify that cleanup has been effective in reducing PCB contamination below acceptable levels and to satisfy the requirements of 40 CFR 761.125 (c)(5)(viii), post cleanup sampling will be performed as described below. Sample collection, analytical, and management will be in accordance with the standards previously outlined.

- **Sampling Methods, Locations, and Rationale**

The methods used for post cleanup sampling will be the same as those used for the pre-cleanup sampling. This will consist of chip, core, and wipe samples

Before any post cleanup sampling begins, the records from the previous sampling will be reviewed to identify areas where elevated levels of PCBs were found. Samples will be taken, based on this review in accordance in a step out fashion, utilizing a 1.5 meter spacing grid, reorienting it, and collecting a sample at each point where the grid falls in the cleanup area (see Figure 2).

- **Analytical Procedures**

Samples collected during post cleanup sampling will be analyzed using the same analytical methods described in the pre-cleanup analytical procedures. After the results are returned and validated as described previously, any sampling locations with PCB concentrations above the established cleanup levels will be decontaminated again using the same procedures as previously specified.

- **Waste Collection**

All waste generated during the post cleanup sampling will be collected, containerized, and disposed in accordance with all Federal (e.g. 40 CFR 761.65(e)(7)), State, and Local regulations.

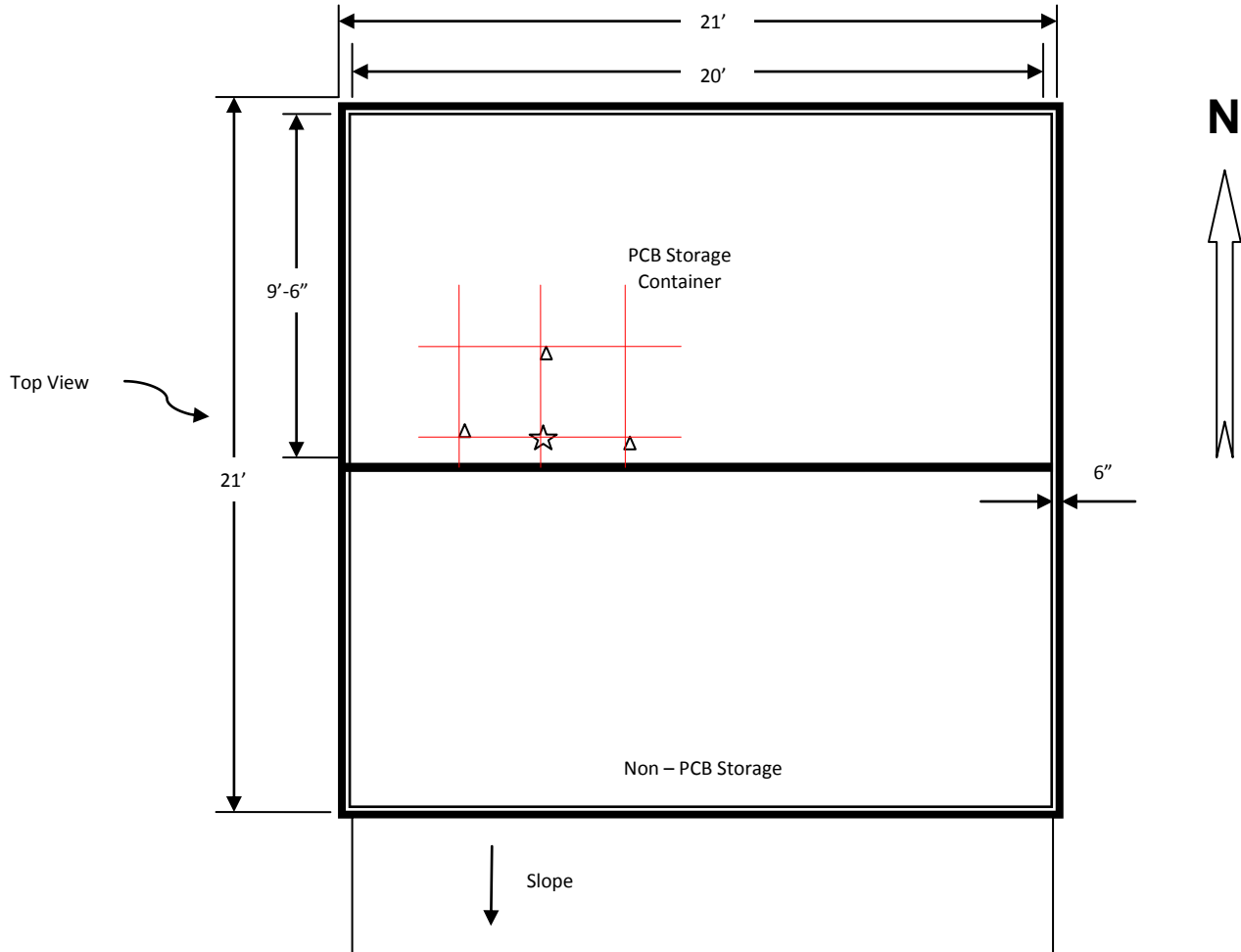
After all sampling and cleanup conditions have been satisfied; a final closure report will be submitted to EPA detailing the above activities. The report will include the following information:

- Full analytical laboratory reports
- Copies of documents (e.g., manifests) indicating total amount of waste disposed
- List of approved facilities where cleanup waste was transported for disposal
- List of any contractors used during the closure process
- Inventory or equipment that will be brought back into reuse
- The nature of the contamination, including types of materials contaminated.
- A summary of the procedures used to sample contaminated and adjacent areas and a table or cleanup site map showing PCB concentrations measured in all pre-cleanup characterization samples. The summary must include sample collection and analysis dates.
- The location and extent of the identified contaminated area, including maps with sample collection sites cross referenced to the sample identification numbers in the data summary.
- A description of any deviation from the closure plan and/or any supplemental activities that may have been conducted based on verification sampling
- A written certification, signed by the owner of the property that the PCB storage facility has been closed in accordance with the approved closure plan. This should incorporate the language for a Certification defined in 761.3

Closure report shall be sent by registered mail to:

Manager  
U.S. EPA Region 9  
RCRA Facilities Management (WST-4)  
75 Hawthorne Street  
San Francisco, CA 94105





- ☆ - Hypothetical contamination location
- △ - Clean-up verification sample location

**Figure 2**