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SITE Aerovox  
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Client, Project and Location <b>USACE New Bedford Resident Office                  New Bedford Harbor Superfund Site                  New Bedford, Massachusetts                  USACE Contract Number                  DACW33-03-D-0006</b>	<b>Project Note</b>	Delivery Order/Task Order <b>TO 0006</b>  Project No. <b>35-BG06-02</b>
	Note No.: 001	
Confirmation of <input checked="" type="checkbox"/> Project note-P1 <input type="checkbox"/> Client Meeting-P4  <input type="checkbox"/> Other	Date Issued: <u>18 April 2008</u> Recorded By: Josh Cummings	
Subject <b>Aerovox Mercury Removal Summary</b>	Issued By: Steve Fox <u>Steve Fox</u> Jacobs Project Manager	

Item	Remarks	Action Required By
1	<p><b>Introduction:</b></p> <p>The purpose of this memo is to provide a brief summary of mercury collection, disposal/recycling and spill clean up activities at the former Aerovox facility. This memo has been prepared at the request of the U.S. Environmental Protection Agency.</p> <p>During previous survey work at the former Aerovox Facility Jacobs discovered a number of small containers and a few localized spills of elemental mercury. Due to the accelerating decay of the facility it was decided to consolidate the mercury and store it in secondary containment in a sound portion of the building.</p> <p>Following a rise in the amount of break ins and vandalism at the facility Jacobs was directed to begin collecting known sources of mercury or MCMA (mercury containing manufactured article) within the building for proper disposal or recycling.</p> <p>The disposal of mercury and/or MCMA is summarized in Table 1. The locations from which mercury devices were collected for disposal from the first, second, and third floors are shown in Figures 1, 2, and 3, respectively.</p>	
2	<p><b>Collection Activities:</b></p> <p>On 26 November 2007 Jacobs began removing and collecting MCMA within Aerovox. Examples of devices collected include thermostats, ignitrons, float switches, wetted relays, manometers, thermometers and hygrometers. Collection of intact MCMA continued intermittently until 18 December 2007 after all portions of the building had been visually inspected.</p>	

Distribution: USACE: KC Mitkevicius, Paul L'Heureux; EPA: Dave Dickerson, Elaine Stanley; Jacobs: Steve Fox, Mark Gouveia, Carl Wilson, Josh Cummings, Site File, Document Control

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	<p>During collection and removal activities nine ignitrons were discovered in potentially energized equipment. On 15 January 2008 electricians from Rogers Electric tested and safely removed all nine ignitrons.</p>	
3	<p><b>Disposal and Recycling:</b></p> <p>In an effort to reduce the quantity of consolidated MCMA within Aerovox several disposal/recycling actions were taken rather than one large shipment.</p> <p>On 11 December 2007 the first batch of collected mercury and MCMA was lab packed and shipped out for recycling/disposal. This shipment was composed primarily of elemental mercury that had been found in a number of small containers throughout the facility.</p> <p>On 06 February 2008, the second batch of MCMA was packed for shipment that included one fiber drum of damaged articles and one steel drum of intact universal waste articles. The drums packed on 6 February were picked up on 11 February for recycling/disposal.</p>	
4	<p><b>Spill Clean Up:</b></p> <p>Most of the mercury spills discovered in the former Aerovox facility were small, localized, and fairly easy to clean up with an amalgamating agent (Mersorb<sup>tm</sup> or mercury sponges). Small spills were addressed on the second and first floor and cleaned of visible mercury. Additional Mercsorb<sup>TM0</sup> was spread over the affected area to amalgamate any fugitive mercury.</p> <p>The two largest mercury spills identified were in the boiler room. Both were on the raised floor portion and appeared to be the result of damaged equipment. The spills were both in close proximity to the floor drainage trench.</p> <p>The largest spill was clearly identified to be the result of collected condensate in a pair of Bailey brand flow meters. The condensate had collected in the mercury portion of the flow meters and when the temperature inside the building dropped below freezing the cast iron housing split. Research found that a similar incident had occurred with a similar Bailey brand flow meter at the Hanford DOE site in 1996.</p> <p>On 18 and 19 February 2008 the boiler room mercury spills were addressed. The compromised Bailey meters were drained of remaining water and mercury then removed. Visible mercury was cleaned from the boiler control surfaces, piping and the floor.</p> <p>In one area, liquid mercury had flowed from the floor surface and into the floor drainage trenches. The trenches were found to contain a thick layer of assorted debris including dirt, rust, paint chips etc. All potentially contaminated debris was removed from the affected trenches. Amalgamating powder was spread over the affected surfaces to immobilize any fugitive mercury. Dams were constructed in the floor trenches preventing the flow of any remaining liquids to the outdoor yard drain.</p> <p>The second smaller spill, the result of a damaged pressure sensor appeared primarily limited to the area beneath the device. The second spill area was heavily covered in debris chips such as paint, brick, rust and glass. Much of this debris also had to be cleaned up with the spill since they were intermixed. The second spill area was also treated with amalgamating powder to stabilize any remaining mercury.</p> <p>The debris and meter parts were drummed for treatment and disposal. The drained water mercury mixture was packaged for recycling. The boiler room debris drums and drained mercury were picked up on 25 February 2008 for recycling/disposal.</p>	

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- Attachments:
- Table 1 Mercury Devices Removed from Former Aerovox Facility
  - Figure 1 Aerovox, First Floor General Locations of Collected Mercury Devices
  - Figure 2 Aerovox, Second Floor General Locations of Collected Mercury Devices
  - Figure 3 Aerovox, Third Floor General Locations of Collected Mercury Devices

Table 1  
Mercury Devices Removed from Former Aerovox Facility

Shipment	Shipment Date	Item(s) <sup>1</sup>	Shipping Container	Weight of Item(s)	Manifest Weight <sup>2</sup>
1	12/11/2007	Waste Mercury	1 - 5 gallon pail	16.6	25
2	2/11/2008	Universal Waste Mercury	1 - 55 gallon drum	120	120
		Waste Mercury	1 - 20 gallon fiber drum	39	45
3	3/10/2008	Waste Solids (Debris)	7 - 55 gallon drums	1050 <sup>3</sup>	1050
		Waste Mercury	1 - 5 gallon pail	23.1	30

Notes:

1 - Waste mercury includes damaged mercury containing devices and elemental mercury, waste solids comprised of boiler room floor trench debris.

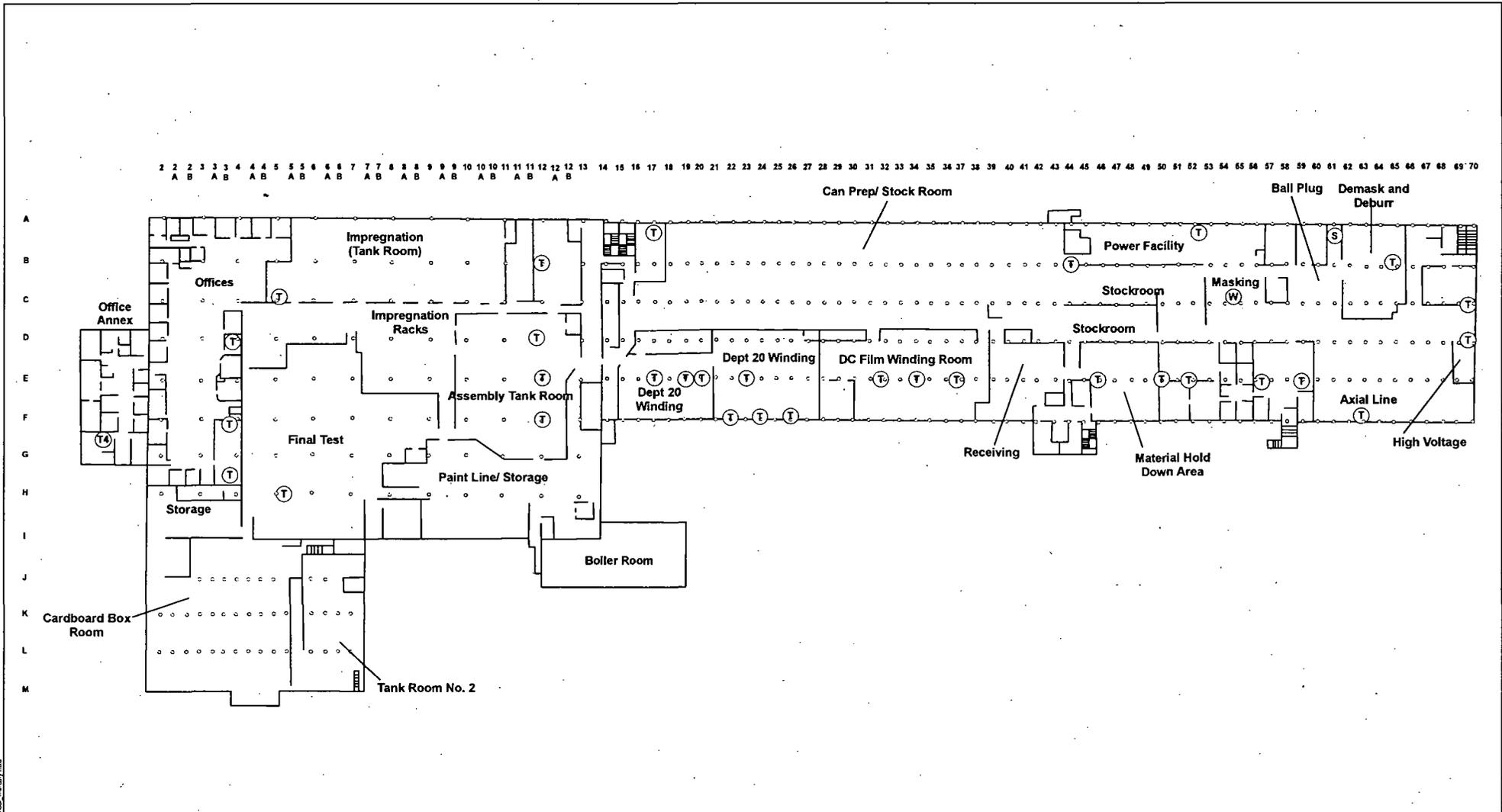
2 - Manifest weight estimated by disposal contractor during packing.

3 - Debris weight estimated by disposal contractor.

Comment:

No mercury containing fluorescent or other light bulbs collected or disposed of in this action.





**Legend**

○ Approximate Device Location  
 Number after device code indicates number of units at location if greater than one.

**Device Code**  
 S - Switch  
 T - Thermostat  
 H - Thermometer  
 W - Waste or Spilled Mercury



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**Aerovox, Second Floor  
 General Locations of  
 Collected Mercury Devices**

Aerovox Facility, 740 Belleville Ave., New Bedford, MA

NAME: [blank] DATE: 04/12/2004 Figure 2

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