

## Summary of Existing Information

### **January 1999 - Phase 2 Environmental Site Assessment (ESA) completed by Coleman Engineering Company for Mr. Louis Meneguzzo.**

- The main focus of the Phase 2 ESA was to sample the ash pile found south and east of the C&H Power Plant.
- Five surface soil samples (S-1 through S-5) collected on 13 January 1999 exceeded Part 201 Direct Contact Criteria for Arsenic (As). The samples exceeded statewide default background levels for As, Barium (Ba), Chromium (Cr), Copper (Cu), Lead (Pb), Selenium (Se), Silver (Ag), and Zinc (Zn).
- One surface soil sample (S-6) collected from the “north portion of the site” exceeded Part 201 Direct Contact Criteria (RDCC) for As, Cu, and Pb. The sample exceeded statewide default background levels for the same metals as the previously collected samples.

### **July 1999 - Phase 1 ESA completed by Coleman Engineering Company for Mr. Louis Meneguzzo.**

- Property is 14 acres with frontage along Torch Lake
- Historical operations:
  - Coal-fired Power Plant
  - Copper ore milling and concentrating facilities
- Stamp mills established in 1868
- Power plant established in approximately 1905
- Stamp sand reclamation initiated in approximately 1915
  - Reclamation process included the construction of two regrinder plants (#1 and #2), a flotation plant, leaching plant, and distillation plant. Reportedly located on the adjacent property to the northeast.
- Abandoned Containers
  - Evidence of above ground tanks (ASTs) and underground storage tanks (USTs) were not identified.
  - Abandoned drums (intact) were observed in the basement of the power house.
  - Dilapidated abandoned drums were identified northeast of the power house along the Torch Lake shoreline.
- Recognized Environmental Conditions (RECs) identified include:
  - Torch Lake Superfund Site Operational Unit #1;
  - Coal Ash: *Identified in a pile south and east of the site building (extent not defined) Residual coal was identified in a coal silo on site;*
  - Mine Tailings;
  - Excavations of Unknown Origin: *Suggested that waste material may have been dumped in these areas and recommended further investigation;*
  - Abandoned Containers (Drums): *Recommended that drum contents be identified and disposed of properly;*

- Refractory Brick: *All brick was considered a hazard as it may contain high levels of metals;*
- Water in Basement: *Recommended pumping, sampling, and disposal of water in the basement;*
- PCB Laden Equipment: *Switches, cranes, and other electrical switching devices are likely to be present on site;*
- Still House and Filter House Operations: *Recommended sampling around the Still House and Filter House to rule out the presence of hazardous substances, including flotation and leaching process chemicals, and boiler treatment chemicals*
- Uninspected Tunnel Near the Still House;
- Flotation and Leaching Process Chemicals;
- Boiler Treatment Chemicals;
- Flooded Basement (Due to water potential hazards were not assessed);
- Improper Disposal of General Wastes: *Recommended further investigation and sampling of waste and debris piles;*
- Copper Concentrate Bags: *Suggested that bags of copper concentrate may be releasing contents to the environment and warrant further investigation;*
- Leachate Spill - *27,000 Gallons cupric ammonium carbonate (1972); and,*
- Historical Waste Discharge to Torch Lake

**March 2000 – Baseline Environmental Assessment (BEA) completed by Coleman Engineering Company for Mr. Louis Meneguzzo.**

- Current intended reuse of the property is residential
- Summarizes the findings outlined above.

**September 2007 – Torch Lake Area Assessment completed by USEPA and WESTON START**

- Identified as Area of Investigation(AOI) 23
- Features dilapidated power plant building, exposed foundations, debris, empty drums, ASTs, slag, and exposed stamp sands.
- On August 8 and August 10, 2007, MDEQ collected a total of two samples of sediment at the C&H Power Plant. One sample was analyzed for metals and base-neutral acids (BNA), the other for PCBs. No results exceeded RDCC.
- Performed reconnaissance and XRF screening activities at the C&H Power Plant AOI on September 5, 2007. The owner of the property was present during the Area Assessment (AA) within the building and provided information to WESTON START personnel regarding the site.
  - The property owner stated that all Asbestos Containing Material (ACM) was removed from the building with the exception of the roofing material.
  - The property owner stated that the transformers located on the west side of building had been removed and soil sampling verification occurred following their removal.
- The owner refused to allow sample collection during the AA. No laboratory analytical samples were collected at this AOI.

- Screened 13 locations with an Innov-X 4000 XP/Auto XRF. Seven locations had concentrations of Pb, As, Cu, and Iron (Fe) the following metals greater than RDCC:
  - Lead (locations C&H-XRF5, C&H-XRF7, and C&H-XRF13);
  - Arsenic (locations C&H-XRF3 and C&H-XRF11);
  - Copper (locations C&H-XRF7, C&H-XRF12, and C&H-XRF13); and
  - Iron (location C&H-XRF6).
- XRF screening at locations C&H-XRF7 and C&H-XRF12 was conducted inside bags labeled “Copper Concentrate”. Screening location C&H-XRF7 was part of a pile of bags approximately 30 feet long by 10 feet wide and location C&H-XRF12 was within a pile of bags located on a pallet (four feet by eight feet) along the shoreline.
- Other features that were documented inside the C&H Power Plant building during the AA include:
  - Roofing ACM;
  - Suspect lead-based paint;
  - Light ballasts that likely contain PCBs and mercury;
  - Piles of coal;
  - Piles of debris;
  - A large piece of equipment on the eastern side of the building that contains an oil gauge and possibly oil;
  - A drum containing tar-like material located in the south-central portion of the building; and,
  - Three additional drums in the flooded basement where an obvious sheen was located; one drum was submerged and the other two drums appeared to be floating.
- Additional site reconnaissance at the C&H Power Plant provided the following information:
  - A storm drain runs along the east side of the property along M-26;
  - A former transformer pad is located on the east side of the building;
  - An AST is located south of the building (more recent origin, gauge showed empty);
  - There is evidence of trespassing and vandalism on site;
  - There is evidence of household-waste dumping on site;
  - There is evidence of recreational use near the shoreline;
  - Exposed stamp sands are present along the southern edge of the property;
  - The majority of the shoreline is lined with rock/brick debris and rip-rap;
  - “No Trespassing” and “Keep Out” signs are posted on the northern shoreline and amongst building ruins along the shoreline; however, a walking trail is also present;
  - Nearby buried utilities had recently been flagged perpendicular to M-26 between M-26 and the south side of the Mineral Building (AOI 22);
  - A three-inch polyvinyl chloride (PVC) stick-up pipe was identified at the southeast of the site building (power house); and
  - There are recreational areas located north and south of the site boundaries along the shoreline, including at a residence south of the site.

- Recommendations included:
  - The sludge and water in the basement and the drums in the basement be characterized to determine proper management;
  - the bags of copper concentrate near the shoreline be removed;
  - The soil data collected after the removal of transformers containing PCBs be reviewed and additional soil sampling be conducted if necessary;
  - The MDEQ issue the owner a due care letter to complete removal of ACM; and lead-based paint be addressed prior to any demolition or re-construction activities.

**October 14, 2008 – MDEQ – Water Bureau**

- Collected three sediment samples and three water samples from the basement.
- Sediment sample labeled 3<sup>rd</sup> Bay Seds contained PCBs detected at 17,000 ug/Kg for Aroclor 1262
- The water sample labeled 3<sup>rd</sup> Bay Seds Water contained PCBs at 32 ug/L for Aroclor 1262.
- Analytical data “Report to” and “Collected by” are for Sharon Baker MDEQ-Remediation and Redevelopment Division.

**February 16, 2010 – MDEQ – RRD – Discussion Notes with Mr. Meneguzzo and Premium Abatement**

- Typically there is 4-6 feet of water in the basement;
- Basement is approximately 17 – 18 feet deep;
- Basement has accumulated sediment ranging from approximately 1 inch - 16 inches thick;
- Property owner recalled that it took less than 1 week to dewater the basement and approximately 3 days for it to refill.
- Reportedly, when the building was active 4 to 5 pumps and sumps were used to keep the basement dewatered.
- The property owner surveyed the elevation of the basement and noted that basement floor is approximately 1.5 feet to 2 feet below the lake level.
- Premium Abatement performed asbestos abatement at the Site in December 2004 into 2005. Reportedly, clearance sampling and OSHA sampling was performed in the area of the main floor of the power house building. It is likely that ACM such as pipe wrap is commingled with the sediment in the basement.
- Reportedly, the former owner had cut pipe and other steel in the basement and never collected it, so it too remains in the basement.
- Reportedly, there are additional drums in the basement near the north end of the power plant that cannot be seen through the holes on the ground floor.