Regulated Material Abatement Work Plan

Troutdale Water Treatment Plant Redevelopment

302 NW 257th Way
Troutdale, OR 97060

Prepared by:
GDSI

Prepared for:
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Suite 207,
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1.0 INTRODUCTION

GDSI provides this work plan based on the hazardous building materials survey that was performed for the City of Troutdale by AMEC Hazardous Building Materials Survey dated October 1, 2014 and Kleinfelder Hazardous Building Materials Survey dated May 11, 2006. GDSI is in receipt of JSE Labs Limited Asbestos Survey report dated November 9, 2018. This work plan is based on these reports and a site visit conducted on November 21, 2018 for the above referenced location. Based on the 18 samples collected and analyzed in this JSE Lab report. GDSI provides the following activities based on their referenced sample numbering system. We have cross referenced these samples with the Demo Site Plan Notes specifically, sheet 3 and 5 of the project drawings.

The Site is located within the City’s Urban Renewal Area, adjacent to its eastern boundary.

The Site consists of two tax lots (1N3E25BD 100 and 1N3E25BD 600) totaling 7.7 acres. It is currently owned by Eastwinds. Historical records indicate that an animal processing facility (slaughterhouse/rendering plant, and subsequently a wool pullery and meat packing facility, operated from the 1890s until the late 1960s at the site. A condemned large warehouse building and water tower, cell phone tower, and small warehouse building, associated with this former processing facility also exist on this lot.
The Site is bordered by Union Pacific Railroad (UPRR) tracks to the south, the Sandy River to the east, and a former publicly owned wastewater treatment plant (POTW) to the north and west. The City owns a number of tax lots that total 11.87 acres that comprise the former POTW property adjoining the northern and western boundaries of the Site. Together, the Site and the property owned by the City comprise the Troutdale Riverfront Redevelopment Project.

The structures requiring abatement activities include:

- Wastewater Management Site Building identified on the final design drawings as structure number 11. (Black gaskets on entry hatches of tanks) (12 SF) These gaskets will be removed within a Negative Pressure Enclosure (NPE) using manual methods and the Asbestos Containing Waste Material (ACWM) will be kept adequately wet. These will be Friable. There are approximately 25 SF of roofing patch compound on the roof of this building as well.
- Primary & Secondary Digester Building identified on the final design drawings as structure number 7. (Gray gaskets on Boiler flanges and access hatch) (24 gaskets) These gaskets will be removed within an (NPE) using manual methods and the ACWM will be kept adequately wet. Some of the removal may involve the use of a portable Ban Saw to keep this material as intact as possible. Some of the means and methods will have to be established once the actual Asbestos Containing Material (ACM) gaskets are identified.
- Eastwind Warehouse Building and the associated Western Office identified on the final design drawings as structure number 17. Built-up Roofing (BUR), some under metal roofing, totaling (43,145 SF) to be removed with manual methods the ACWM will be kept adequately wet. The small office at the West end of the building will be machine wrecked and disposed of as Asbestos Containing Waste Material (ACWM), the structure has failed and is un-safe to try to separate out the roofing material and Joint Compound. This small section of the building, except for the concrete pad, will be disposed of as ACWM and all other applicable work practice requirements for friable asbestos abatement in OAR 340-248-0270 are required and packaging and disposal of as ACWM per OAR 340-248-0280.
- Eastwind Warehouse Building identified on the final design drawings as structure number 17. Tar coating on west Concrete Masonry Unit (CMU) wall (400 SF).
- Eastwind Warehouse Building identified on the final design drawings as structure number 17. Gray window putty & exposed friable boiler gasket material (pump-house) will be removed using small negative pressure enclosures (NPE) along with work practices outlined and applicable in OAR 340-248-0270. The window units and the gasket material will be wrapped, labeled and disposed of as ACWM per OAR 340-248-0280 (200 SF).
- Burnt shed northeast of the Eastwind Warehouse Building identified on the final design drawings as structure number 15. This structure has collapsed. See section 2 of the work plan details.
- Refer to Figure X in the Appendix attached to this plan for site specific locations.
A. All asbestos removal work will be performed following procedures outlined in OAR 340-248-0270, ACWM will be packaged and disposed of in no less than either double asbestos 6mil disposal bags or 2 layers of 6mil poly sheeting, waste generator labels and asbestos danger labels and will be accompanied by Form ASN-4 per OAR 340-248-0280.

B. ‘Asbestos Danger’ warning signs will be posted at all potential entrances and exits to work areas, in each case at regulated barrier tape or entrance to any NPE that will be utilized as required by OSHA 29 CFR 1926.1101, any additional signage as required by any local or state agencies. Warning banner tape, rope, physical barriers, locked doors, etc., as appropriate, will be used in addition to help keep unauthorized persons out of the regulated work areas.

C. All asbestos abatement will be conducted by Oregon certified asbestos workers and supervisors.

D. A certified supervisor will remain onsite during all active friable and non-friable abatement activity.

E. All asbestos abatement work and associated activities are conducted and an adjoining area where asbestos-containing waste material generated from the project site is securely packaged and stored, must be within a regulated area.

F. A functioning manometer or similar device verifying a negative pressure environment of -0.02 inches of water column will be attached to all active abatement NPE or Mini enclosures.

G. A viewing window will be installed on all active NPE where feasible.

Negative Pressure Enclosures & Mini-Enclosures (NPE)’s

A. Negative Pressure Enclosures (NPE)’s as well as Mini Enclosures will be utilized across the site (depending on the material being addressed) for various gaskets & window putty abatement operations.

B. A Negative pressure enclosure is a barrier surrounding the area of asbestos abatement comprised of plastic with a minimum thickness of 6 mil with air flow exhausting through a HEPA filter exhaust system measured by an attached and functioning manometer or similar device verifying a negative pressure environment of -0.02 inches of water column. The barriers will cover all gaps in the area surrounding the asbestos abatement.
Roofing, Penetration Sealant, and Patching Removal

Pre-Work Safety Requirements:
- Subjects that need to be reviewed at initial safety meeting – Fall Protection Plans. This type of work may require a site specific fall protection plan. This fall protection plan will be submitted by GDSI to the contractor for approval.

Personal Protective Equipment:
- Half Face Air Purifying respirators with High-Efficiency Particulate Air (HEPA) filters.
- Safety glasses and disposable gloves.
- Disposable (Tyvek type) coveralls with hood & boot covering.
- Fall Protection equipment as required by the Fall Protection Plan.
- Appropriate work boots will be required.
- Also, see section 3 for additional information

Manual Removal Steps:
1. Establish a Regulated area using Asbestos Danger Tape with appropriate OSHA signage. Remove the material as intact as possible using manual methods, the ACWM will be kept adequately wet.
2. Metal roofing will be removed prior to ACM roofing using manual methods and will be staged on the ground.
3. ACM Roofing must be removed as wet as is feasible.
   - Apply water using water hose and sprayer to adequately wet the ACM to prevent visible emissions. Re-wet as necessary.
   - Using water on pitched roofs creates a slip and fall hazard, use only light wetting and follow all fall protection guidelines.
   - Keep all water hoses in good repair. Leaks can cause substantial damage.
4. Control dust by adequately wetting the material and using approved methods of lowering roofing debris to the ACWM container.
   - Never allow un-bagged waste to accumulate on the roof. ACM Roofing will be placed in lined, secured dumpster or truck. This material will be removed using manual methods the ACWM will be kept adequately wet, within a regulated area per OAR 340-248-0270 (B)(e)(F)(i). This material will be disposed of in no less than either double asbestos 6mil disposal bags or 2 layers of 6mil poly sheeting, waste generator labels and asbestos danger labels and will be accompanied by Form ASN-4.
Pre-Work Safety Requirements:

- This building, identified on the final design drawings as structure number 15 identifies 600 square-feet of asbestos-containing petroleum based friable roofing on plywood sheeting. The building has collapsed.
- Care should be exercised when working on this collapsed structure to prevent slips, trips & falls.

Personal Protective Equipment:

- Half Face Air Purifying respirators with High-Efficiency Particulate Air (HEPA) filters.
- Safety glasses and disposable gloves.
- Disposable (Tyvek type) coveralls with hood & boot covering.
- Fall Protection equipment as required by the Fall Protection Plan.
- Appropriate work boots will be required.
- Also, see section 3 for additional information

Manual Removal Steps:

- The friable asbestos-containing roofing will be abated by certified asbestos personnel within an established regulated area consisting of asbestos barrier tape and asbestos signage. Per OAR 340-248-0270(8(e)(F)(i) a negative pressure enclosure (NPE) is not required. Asbestos certified personnel will don appropriate PPE, apply methods to keep the material adequately wet during abatement and packaging. Visible emissions are not permitted during the abatement and packaging process. The resultant ACWM will be properly packaged with no less than 2 layers of 6mil poly sheeting, waste and generator labels, and staged within a regulated area. Upon transport, a completed asbestos waste shipment form (ASN4) will be maintained with the waste and disposed of at a facility permitted to accept ACWM.

Small Office Structure/ West end of Building 17

Pre-Work Safety Requirements:

- Subjects that need to be reviewed at initial safety meeting-
- This work will require an approved Variance from the DEQ which would allow the work to commence without the use of a negative pressure enclosure.
- This part of the structure has <1% drywall with >1% Joint compound, ACM Roofing and a black waterproofing material that has been determined to be ACM applied to the western CMU wall of the building. Due to its dilapidated state, this material is unsafe to access for abatement.
The small office at the West end of the building will be machine wrecked. Prior to the start of work a safety meeting will be held that will include discussing non-verbal commands for the operator as well as the ground crew.

The excavator will be operated by Daren McLean, a Certified Full-Scale Asbestos Worker (F 21149).

A ground crew will be assigned to prepare and line drop boxes with either metal or vinyl banding, reinforced 6mil poly and to seal the burrito’s up with tightened bands and duct tape once they have been filled. Ground crew will also be responsible for keeping waste material adequately wet during machine wrecking.

Personal Protective Equipment:
- Half Face Air Purifying respirators with High-Efficiency Particulate Air (HEPA) filters.
- Safety glasses and disposable gloves.
- Disposable (Tyvek type) coveralls with hood & boot covering.
- Appropriate work boots will be required.
- Also, see section 3 for additional information

Machine Removal Steps:
- Establish a Regulated area using Asbestos Danger Tape with appropriate OSHA signage.
- The structure has failed and is un-safe to try to separate the roofing, joint compound and waterproofing materials. This material will be removed per OAR 340-248-0270 & OAR 340-248-0270(8)(e)(F)(i), This will require a regulated area, appropriate signage, methods to keep the material adequately wet and Certified Full Scale Asbestos Workers and a Certified Supervisor.
- Place ACWM into drop boxes lined with no less than 2 layers of 6mil reinforced poly sheeting, to be secured with banding, waste & generator labels for disposal. Each drop box will be transported to the approved waste facility with appropriate ASN-4 form.
- Once the work begins it will be carefully carried out.
- Once abatement has been completed, the remaining pad will be cleaned of debris and left for demolition by Corpac.
- This small section of the building, except for the concrete pad, will be disposed of as ACWM with required packaging and disposal of asbestos-containing waste material including warning labels, generator labels and Form ASN-4 per OAR 340-248-0280.
- A third party consulting firm will conduct a visual inspection/clearance on this area prior to removal of regulated area.
Gaskets on Piping, Boiler and Access Hatches in Buildings 7, 11 & 17

Pre-Work Safety Requirements:
- Review at initial safety meeting: Cutting, abrading or sanding Gasket material is prohibited.
- Contractor will ensure that any hazardous energy has been released prior to removal of these gaskets.

Personal Protective Equipment:
- Half Face Air Purifying respirators with High-Efficiency Particulate Air (HEPA) filters.
- Safety glasses and disposable gloves.
- Disposable (Tyvek type) coveralls with hood & boot covering.
- Appropriate work boots will be required.
- Also, see section 3 for additional information

Proper Removal Steps:
- Construct a functional mini enclosure suited to the task at hand. Use guidance provided in NPE section of Section 2 (above) and smoke test for Quality Assurance
- Establish a Regulated area using Asbestos Danger Tape with appropriate OSHA signage.
- Gasket flanges will be covered in duct tape then wrapped in 6mil poly. The ACWM will be double wrapped/bagged with 6mil poly and then cut out and prepared for disposal, Waste material will then be labeled with danger labels, generator labels and will be accompanied by Form ASN-4.
- Where any gaskets are removed in an NPE, there will be required signage, manual work practices using methods to keep the material adequately wet and engineering controls.
- Where possible, wrap & cut methods will be utilized in order to keep the material as in-tact as possible. This will be accomplished with portable ban saw or other equipment as needed.
- All Gasket material will be disposed of as ACWM with required packaging and disposal of asbestos-containing waste material including warning labels, generator labels and Form ASN-4 per OAR 340-248-0280.

Window Putty/ Caulking Removal, Intact Removal Methods

Pre-Work Safety Requirements:
1. This work activity may require a site specific Fall Protection Plan. Ensure a plan is implemented and on-site before beginning removal.
2. Review site specific Fall Protection Plan before any removal begins at initial safety meeting. All workers new to the job site are required to review the Fall Protection Plan and these work procedures before starting work.
3. Review at initial safety meeting: Cutting, abrading or sanding window putty is prohibited.
4. Review at initial safety meeting: Intentionally breaking Windows and Putty is prohibited.
5. Windows with Gray window putty will be removed using a small negative pressure enclosure (NPE) along with manual methods, the material will be kept adequately wet and this will include engineering controls. These window units will be wrapped labeled and disposed of in no less than either double asbestos 6mil disposal bags or 2 layers of 6mil poly sheeting, waste generator labels and asbestos danger labels and will be accompanied by Form ASN-4 per OAR 340-248-0280.

6. This activity has a high possibility for cuts and lacerations. If necessary, tape windows to minimize shatter. Always wear safety glasses during window removal activities.

7. This activity requires a barrier to control access below window removal. Eliminate risk of people walking below window removal operations!

Personal Protective Equipment:
- Half Face Air Purifying respirators with High-Efficiency Particulate Air (HEPA) filters.
- Safety glasses and disposable gloves.
- Disposable (Tyvek type) coveralls with hood & boot covering.
- Appropriate work boots will be required.
- Also, see section 3 for additional information

Proper Removal Steps:
1. Window removal will be accomplished using a small negative pressure enclosure (NPE) along with rules outlined and applicable in OAR 340-248-0270 and will include steps including Establishing a Regulated area using Asbestos Danger Tape with appropriate OSHA signage. manual work practices, methods to keep the material adequately wet (pump sprayer) and will include engineering controls (HEPA filtered machines). These window units will be wrapped, labeled and disposed of in no less than either double asbestos 6mil disposal bags or 2 layers of 6mil poly sheeting, waste generator labels and asbestos danger labels and will be accompanied by Form ASN-4 per OAR 340-248-0280. GDSI will be using water and local exhaust within the NPE to control fiber release. Any excess water from this removal operation will be captured and placed in approved disposal containers and treated as ACWM.
2. Tape Glazing/ glass to minimize shatter.
3. Wet each widow before removal.
4. Remove and set aside trim board and shims.
5. Carefully remove wet window to minimize breakage. Remove window sashes and wrap in multi-layers of 6mil poly sheeting and apply labels.
6. Immediately lower windows to the ground, scaffold or man-lift surface manually.
7. Place whole intact and wrapped windows in a lined, secured disposal dumpster or enclosed
3.0 SAFETY

Personal Protection

A. **Personal Protective Equipment for Asbestos Removal Includes:**
   1. Work clothes will consist of disposable full-body coveralls with head and foot covers ("Tyvek" or equivalent), boots. Eye, hearing and fall protection, and hard hats will be available as appropriate.
   2. Respirators will be approved by the National Institute for Occupational Safety and Health (NIOSH) and accepted by OSHA. Selected respiratory protection will provide workers with a maximum calculated fiber level of 0.01 fibers/cubic centimeter (f/cc).
   3. At a minimum, all workers will be qualitatively fit-tested at the time of respirator selection and at least annually thereafter. A supply of replacement filter cartridges and replacement parts will be available as needed. Cartridges that have become wet or clogged will be replaced immediately.
   4. Each worker will, upon entering the work zone - remove street clothes in the clean change station established and controlled by the Certified Asbestos Supervisor, put on and fit-check his or her respirator, put on clean protective clothing and sign in on the ‘Worksite Entry Logbook’ before entering the equipment room or the work area.
   5. Workers will, each time they leave the work zone and as appropriate - remove gross contamination from clothing before leaving the work area; by at a minimum, HEPA vacuuming themselves off and proceeding to a remote changing facility.
   6. Workers will not eat, drink, chew gum or apply makeup at the worksite except in a designated break room. Smoking or using tobacco products is prohibited.
   7. Workers will be protected with respirators and protective clothing prior to the first disturbance of asbestos-containing or contaminated materials and until final cleanup is completed.

Tools & Equipment

A. Water Sprayer - The water sprayer will be an airless or other low-pressure sprayer for amended water application. See Appendix for SDS

B. Air Purifying Equipment - Air purifying equipment will consist of High-Efficiency Particulate Air (HEPA) filtration systems. Each unit will be capable of variable volume from a minimum of 500 CFM to at least 1700 CFM under load and will have at least 2 stages of pre-filtration ahead of the HEPA final filter. No air movement system or air equipment will discharge asbestos fibers outside the work area, unless it has been HEPA filtered through these units. This equipment, when not in use will be stored in a secured truck or container.
C. Water Purification Equipment – Filtration equipment capable of removing fibers nominally 5 microns in length or as required by local regulations, from water used in abatement work and decontamination showers.

D. Vacuum Equipment - All vacuum equipment utilized in the work area will be HEPA vacuum equipment, and suitable for wet/ dry usage. This equipment, when not in use will be stored in a secured truck, designated building or container.

E. Transportation Equipment - Transportation, as required, will be suitable for loading, temporary storage, transit, and unloading of contaminated waste without exposure to persons or property. Equipment will have a hard top, bottom and sides. If equipment is rented, notify rental agency in advance, in writing, of intended use of equipment.

F. Electrical - Electrical tools, equipment and lighting will meet all applicable codes and regulations. Ground fault protection, as required by OSHA and state regulations, will be in effect at all times. Contractor will take all additional precautions and measures necessary to ensure a safe working environment during wet removal.

G. Other Tools and Equipment - Provide other suitable tools for removal, enclosure, encapsulation, patching, and disposal activities including but not limited to: hand-held scrapers, wire brushes, sponges, and rounded-edge shovels.

4.0 Disposal

Waste Hauler: GDSI
8823 N Harborgate Street
Portland, OR 97203

Disposal Facility: Wasco County Landfill
2550 Steele Rd.
The Dalles, OR 97058

A. Warning labels and Generator labels will be affixed to the lid and sides of containers and/ or waste bags, whichever applies. Warning labels will be conspicuous and legible and contain the following words:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
AVOID BREATHING AIRBORNE ASBESTOS FIBERS
B. All current waste handling, transportation and disposal regulations for the work site and for each waste disposal landfill will be followed. These regulations include, but may not be limited to; the Federal Environmental Protection Agency (US-EPA), Federal Department of Transportation (US-DOT), the Oregon Department of Environmental Quality (DEQ).

C. Double-bagged material containers will be delivered to the Wasco County Landfill for burial. Labels and all necessary signs will be in accordance with appropriate local standards.

D. Decontaminated containers will be removed from the facility as soon as possible, in accordance with local regulations. Notify disposal site in advance of delivery of material to assure immediate burial of containers.

E. Written proof of disposal at an approved disposal site will be submitted to the building owner. The DEQ ASN-4, ‘Waste Shipment Record Form,’ will be used; completely filled out and signed and accompanied by tickets and/or receipts from the disposal site.

5.0 AIR MONITORING

A. **Personnel air monitoring during abatement:**
   1. Personnel air monitoring will be conducted by GDSI during asbestos abatement in each work area. Sampling will begin when asbestos removal begins. Samples are to be taken during each 8-hour shift until abatement is completed in that work area, or until not required as per 29 CFR 1926.1101 or equivalent state regulations.
   2. The on-site Certified Supervisor will determine which worker(s) in each work area is most likely experiencing the most severe exposure. This is the “most contaminated worker(s).” An eight-hour time weighted average (TWA) and 30-minute excursion samples will be collected on these worker(s).
   3. The number of air samples collected will be determined by the on-site Supervisor and may be altered during the project based on work activity and air sampling results.
   4. Personnel air monitoring results can be made available as soon as is practicable but no more than 7 days upon receipt from the analytical firm asked to read these cassettes.

B. **Visual Inspection and Clearance air sampling:**
   1. A visual inspection will be conducted by an independent 3rd party prior to any clearance air sampling and after the completion of regulated material abatement for each structure or building to verify that all regulated material has been removed. A copy of the inspection record will be provided to Corpac.
   2. All asbestos clearance air sampling will be done in accordance with EPA, DEQ requirements in NPEs where greater than 160 SF or 260 LF of ACM was abated. An independent 3rd party will be selected to conduct Clearance Air Monitoring needed for this project.
3. Clearance air sampling after abatement work inside a negative pressure enclosure (NPE) will be aggressive. Work done outside NPE’s or outdoors will be sampled using non-aggressive sampling methods, as permitted with approved variance from DEQ or other appropriate local authorities.

4. Analysis of clearance samples will be by Phase Contract Microscopy (PCM). The liters per minute will range for clearance air sampling pumps will be between 1 to no more than 10 liters per minute, for a total number of liters between 1200 to 3000 liters.

5. Results of clearance air sampling will be submitted to DEQ on Form ASN-5 as required by OAR 340-248-0270

C. Project Quality Assurance

A. If any time during the work, analysis of an air sample taken outside of containment indicates a fiber count in excess of 0.01 f/cc, the Supervisor will immediately notify the Project Manager the Contractor and the owner’s representative who will in turn notify DEQ.

B. Immediately upon being notified, the following steps will be taken.
   1. Stop abatement work.
   2. Identify the source of high fiber counts.

3. Immediately correct any containment breaches, pressure differential changes, or other potential causes. Address any other concerns that the owner’s representative may have. The on-site Supervisor will determine the affected area and affected adjacent areas to be contained.
   a. Clean the affected area and the affected adjacent areas. Cleaning of the areas will include the use of wet methods and HEPA vacuuming.
   b. Resample air until fiber counts are determined to be below 0.01 f/cc.
   c. Secure and repair containment barriers; repair or add equipment.
   d. Modify work procedures and make other changes determined to be the possible cause of the high fiber counts.
6.0 REGULATED AND HAZARDOUS MATERIALS

Mercury Containing Lighting Removal & Disposal

Florescent tubes of all configurations and other Mercury containing light bulbs will be carefully removed from all fixtures and locations and placed into proper disposal boxes or containers. Disposal containers should provide protection from the forces expected to be encountered during transport and handling. These containers will be taken to Eco-Lights on Columbia Blvd. in Portland, for final processing and recycling.

While handling mercury containing units, workers should exercise an abundance of caution and avoid breakage

PCB Light Ballast Removal and Clean-Up Procedure

Identification
1. Non-PCB ballasts are required to be marked “NON-PCB.” This is printed on manufacturer’s label. If the “NON-PCB” label is not located, you should assume that it is a PCB containing ballast. Ballasts made before 1979 generally contain PCBs.
2. Mercury filled fluorescent tubes are to be handled with great care. Removal will be accomplished by removing one tube at a time from the target fixture. Use of ladder or scissor lift will be dictated by the nature of each project. Tubes will be hand carried to the ground by workmen and then containerized immediately into cardboard boxes or drums designed for waste tube disposal. Never force a tube into a space where it will not easily fit. Tubes are vacuum sealed and will implode first, then explode, causing debris to be spread over a wide area.

Personal Protection / Hygiene
Polychlorinated Biphenyls (PCBs) are known to be a Carcinogen. It may cause cancer. Personal protection must be worn to prevent absorption by the body from skin contact or ingestion.

1. Nitrile rubber gloves must be worn while handling any PCB ballast.
2. Tyvek coveralls, eye protection and Half Face Respirators with HEPA and/ or Organic Vapor filters.
3. No hand mouth activity is allowed while working with PCBs.
4. Workers will wash hands and face with soap and water before lunch, after removal activity and at shifts end.
5. Gloves and Tyveks will be disposed of as PCB waste along with the light ballast.
Removal
1. Power to light fixtures will be locked and tagged out, and tested with a voltmeter, or tick tester.
2. Lay down plastic sheeting under each fixture to be worked on.
3. Disassemble the light fixture as needed to access the ballast.
4. Disconnect or snip the wires that supply power to the ballast and remove the screws that attach the ballast to the fixture.
5. If the ballast shows any signs of leakage, use a rag that is lightly saturated in solvent or detergent to wipe the ballast and surrounding area completely clean of all PCB residues.
6. Place ballasts in a 55-gallon drum. The drum should be lined with a six mil thick polyethylene liner. Ballasts are heavy so don’t overload the drums. Drums will hold 150 to 200 ballasts from a 4-foot light or about 75 to 90 ballast from an 8-foot light. Average weight of a full drum should be between 600 and 700 pounds.

Clean-Up of PCB Contaminated Areas
1. Workers will use listed safety equipment and all power to fixtures are locked out.
2. Lay down plastic sheeting under each fixture to be worked on.
3. Access fluorescent lamps, remove and store for reuse or disposal as directed.
4. The consultant will provide a diagram indicating the contaminated areas.
5. Perform a double wash procedure of contaminated area and the light fixture cavity with solvent/detergent using paper towels.
6. Any gross contamination found will be immediately documented and presented to owners’ representative, with a request for instructions to proceed.
7. All contaminated materials used for clean up as well as any contaminated PPE, will be disposed of in the same drum as PCB ballast.

Disposal
1. Bolt ring metal drums will be marked with PCB HAZARD and DIRECT INCINERATION labels.
2. All drums being held for more than one day on-site are to be stored in a designated demarcated area inside Building 1. The area will have a six-mil poly floor covering.
3. WasteXpress will be responsible for transport and incineration of all PCB waste from this project.

7.0 APPENDIX

Figure X
Structure Name (to be Abated and/or Demolished) | Structure Number | ACM¹ | Hg² | PCB³
---|---|---|---|---
Maintenance Building | 1 | X | | |
Primary/Secondary Digester | 7 | X | X | |
Wastewater Management Site | 11 | X | X | |
Burned Shed | 15 | X | X | |
Small Eastwind Warehouse | 16 | X | | |
Large Eastwind Warehouse | 17 | X | | |
Structure Name (Abated and/or Demolished) | Structure Number | ACM¹ | Hg² | PCB³
---|---|---|---|---
Control Building | 3 | X | X | |
Secondary Clarifier | 4 | | | |
Chlorine Contact Basin | 5 | | | |
Primary Clarifier | 6 | | | |
Primary/Secondary Digester (Gravity Thickener only) | 7 | | | |
Headworks | 9 | | | |
Lab Building | 10 | X | X | |
Small Eastwind Clarifier | 14 | | | |
Large Eastwind Clarifier | 18 | | | |
²ACM = Asbestos Containing Materials
²Hg = Mercury Containing Materials
²PCB = Polychlorinated Biphenyl Containing Materials

NOTE:
2. Mercury (Hg) containing materials consist of intact and broken fluorescent light tubes.
3. Polychlorinated Biphenyl (PCB) containing materials consist of ballasts in light fixtures.
4. There is known piping containing non-friable asbestos connecting some structures of the Wastewater Treatment Plant. Abatement will commence once fully quantified.
5. Quantities and materials will be verified in the field.
6. Quantities and materials based on previous survey work.
7. Figure reflects current demolition and abatement progress as of January 11, 2019.
8. LF = linear feet, sq.ft. = square feet.
9. Figure prepared by WOOD for GDSI.

LEGEND:
- Site Boundary
- Structure with HBM to be Abated [if present] and then Demolished
- (HBM Abated [if present] and then Demolished)