

**BEFORE THE STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
FINAL DETERMINATION
FEASIBILITY AND PLAN OF OPERATION REPORT
VEOLIA ES TECHNICAL SOLUTIONS, LLC
EPA ID# WID988566543
FID# 246076050**

GENERAL FACILITY INFORMATION

Facility Name, Site Operator and Address

Veolia ES Technical Solutions, LLC
David Braun, Operations Manager
1275 Mineral Springs Drive
Port Washington, WI 53074

Facility Owner

Veolia ES Technical Solutions, LLC
1275 Mineral Springs Road
Port Washington, WI 53074

Property Owner

Veolia ES Technical Solutions, LLC (VESTS)
700 East Butterfield Road
Lombard, IL 60148

Facility Location

City of Port Washington. Northwestern ¼ of the Southeastern ¼ of Section 32, Township 11 North, Range 22 East. Latitude: 43 deg 22' 18.1" N, Longitude: 87 deg. 53' 19.1" W

Facility Contacts

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David Braun – Operations Manager, Veolia ES Technical Solutions, 262-243-8904

License Hazardous Waste Storage and Treatment Units

License Number	Unit Description	Sub Unit Description	Unit Type	Capacity Limit
6008	Storage Room 1	Pod 1A	Storage	3,575 gallons
		Pod 1B	Storage	2,145 gallons
		Sub room	Storage	501 gallons
	Storage Room 2	Pod 2A	Storage	2,530 gallons
		Pod 2B	Storage	2,860 gallons
		Pod 2C	Storage	2,475 gallons
	Storage Room 3	Pod 3A	Storage	935 gallons
		Pod 3B	Storage	840 gallons
		Pod 3C	Storage	746 gallons
		Pod 3D	Storage	1,100 gallons
		Pod 3E	Storage	980 gallons
4585	Retort Room	R3	Miscellaneous Treatment	Total treatment capacity is not to exceed 25,000 pounds per day
		R4	Miscellaneous Treatment	
		R5	Miscellaneous Treatment	
		Miscellaneous Treatment		

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Facility Description and Operation

Veolia ES Technical Solutions (VESTS) Treatment Storage and Disposal Facility (TSDF) consist of the hazardous waste container storage units and the mercury recovery/retort operations, which is now being classified as a miscellaneous unit due to the potential implementation of the Mercury Export Band Act of 2008. The TSDF operates under EPA I.D. # WID988566543 and Department FID # 246076050 and is located at 1275 Mineral Springs Drive, Port Washington, Wisconsin.

The TSDF also operates as a destination facility for the recycling of universal waste including mercury containing lamps and mercury containing devices. The TSDF also serves as a permanent household hazardous waste collector under s. NR 666.909 Wisconsin Administrative Code (WAC). The TSDF manages a wide variety of hazardous waste for primarily industrial clientele. Hazardous wastes from other generators are stored and consolidated in the TSDF until a substantial load of wastes can be collected on a route-run with licensed transport vehicles. In this manner, economical waste disposal is available to industrial and state and local government agencies and the TSDF functions as a regulatory benefit to large and small quantity generators. VESTS accepts waste from off-site generators which provides logistical support assisting generators in the shipment of those wastes within the generator's prescribed accumulation period. Such wastes can be transported and stored in the TSDF (within the permitted storage capacity) until proper disposal can be achieved. This practice reduces storage violations at generators and provides professional management of the waste. Furthermore, the TSDF provides a service to the local community for hazardous waste storage (pending disposal) of miscellaneous small quantity waste from municipal agencies such as the Highway Department, Fire Department, and Police Department.

The TSDF also has developed a household hazardous waste (HHW) program whereby local residents can dispose of wastes such as pesticides and herbicides, used paint thinners, paint and household batteries. The ability to bulk wastes is also a benefit that is consistent with federally mandated waste minimization laws. The facility is also operates as a large quantity universal waste handler. The facility collects mercury-containing lamps, devices and articles, universal batteries and computer equipment for sorting and then off-site shipment.

General Location

VESTS is located at 1275 Mineral Springs Drive in the Northwestern ¼ of the Southeastern ¼ of Section 32, Township 11 North, Range 22 East, in the City of Port Washington, Ozaukee County, Wisconsin. The Hazardous Waste TSDF is located in an industrial park on the southern edge of Port Washington. Mineral Springs Drive borders the property toward the east. Mineral Springs Drive intersects Sunset Road approximately ¼ mile north of the site. Maritime Drive borders the property toward the south.

No parks, hospitals, or nursing homes are located within ½ mile of the facility. A correctional facility is located approximately ½ mile west of the facility.

Zoning

The areas to the immediate north, south and east of the property are zoned industrial and currently contain light manufacturing industries. The area immediately west of the property is zoned industrial and is a commercial storage facility.

Current Site Buildings

The facility consists of the following structures:

- The Veolia ES Technical Solutions, LLC office building houses administrative offices.
- The process building consists of the Loading Dock area, the storage pods, the laboratory office, the household hazardous waste collection area, the 90-day hazardous waste storage area, the retort room, universal waste storage areas, lamp processing area. A connected building contains the two lamp machines and roll-off bins for glass and plastic.
- The chiller and air handler for the retort room are located off the northwest corner of the main process building.
- An emergency generator is located off the northeast corner of the main process building.

- An additional chiller is located to the west of the retort area outside of the retort/storage building.
- Areas within the fenced property include:
 - Areas to receive and stage bulk transports and trailers.
 - Areas provided for bulk loading and unloading
 - Areas to hold empty non-placarded tankers and trailers.
 - Roll-off bins holding recyclable materials or solid waste.

Facility Recent Compliance History

The most recent Department inspection was performed on April 1, 2014, with both a Compliance Evaluation Inspection (CEI) TSD and a CEI Universal Waste Inspection performed. No violations were documented. On April 9, 2013, a CEI TSD and a CEI Permanent HHW/VSQG Collection was performed and at that time no violations detected. On December 8, 2011, a CEI TSD was performed by the Department resulting in a notice of noncompliance (NON) issued January 20, 2012, and closed out on February 23, 2013, for a leaking container.

On August 1, 2013, EPA performed an inspection and three violations were detected. These violations were closed out on February 28, 2014.

Waste Analysis Plan

In order to ensure proper hazardous waste handling and storage, a Waste Analysis Plan (Waste Analysis Plan) is used for waste received into the TSDF. The Waste Analysis Plan outlines how the TSDF will comply with the requirements of NR670.014(2)(b) and (c) and NR664.013. In order to support the Waste Analysis Plan, the TSDF maintains a laboratory certification (ID No. 246076050) in accordance with the applicable requirements of NR149. The goals of the Waste Analysis Plan include being able to identify and separate waste types that are incompatible, ensure proper handling procedures are identified for various waste types, and ensure that waste types handled are included in the facility permit.

The Waste Analysis Plan identifies the necessary sampling methodologies, analytical techniques, pre-acceptance procedures, incoming load procedures, process operations procedures and quality control policy for all hazardous wastes that enters VESTS for storage and treatment.

VESTS requires the generator to submit a certified waste profile based on generator knowledge (e.g., past waste disposal company profiles or a detailed chemical and physical analysis of a representative sample of their waste s. NR 664.0013(2)(e) WAC). In accordance with s. NR 664.0013(2)(f) WAC, the profile will be assessed for unique potential incompatibility issues the waste stream may have with respect to specific management methods (s. NR 664.0017(3) WAC). In addition, the profile will be evaluated to determine whether the waste stream is subject to the NR 664 Subchapter CC standards for containers, as required under s. NR 664.1083 WAC. The profile will also be evaluated to determine whether chemical analysis indicates the waste meets or exceeds the hazardous waste Landfill Disposal Restrictions (LDR) standards as required under s. NR 668.07 WAC. If using laboratory analysis, the generator located in the State of Wisconsin, must use a State of Wisconsin certified and registered laboratory and use analytical methodologies required in chapter NR 219 WAC and s. NR 662.04 NR 664.0013(1)(a)1 WAC. Field analysis of pH, specific conductance and temperature will be acceptable. If a generator requires virgin material to be stored at the TSDF, the generator may submit a Safety Data Sheet (SDS) outlining detailed chemical and physical properties. The profile may include data developed under chapter NR 661 WAC and s. NR 662.220 WAC and existing published data on the hazardous waste or on data from hazardous waste generated from a similar process.

The majority of the waste containing mercury received from off-site generators is generated as a result of spills, articles or devices containing mercury being taken out of service, or fluorescent lights destined for recycling. Although the wastes do not meet the definition of unused chemicals, the physical and chemical properties of such wastes will not have changed from those of the original material. As such, it is anticipated that a description of the waste is sufficient to satisfy the waste analysis requirements. Profiles for mercury-containing articles and mercury-contaminated debris will be evaluated to determine if they contain recoverable amounts (e.g., presence of

free mercury). In accordance with s. NR 661.100(4)(b)1 WAC the profiles will be evaluated to determine whether the waste contains less than 500 ppm by weight total NR 661 Appendix VIII organic constituents. Wastes that contain less than 500 ppm by weight Appendix VIII organic constituents will then be evaluated for their heating content. Wastes with less than 5,000 BTU/lb will be designated as being acceptable for retort under s. NR 666.100(4)(b)2 WAC. Wastes that contain greater than 5,000 BTU/lb will be evaluated to determine whether the waste is specifically listed in NR 666 Appendix XIII. If the waste is included in Appendix XIII, the waste will be approved for retorting in accordance with s. NR 666.100(4)(c) WAC.

If the waste is not specifically listed in Appendix XIII, the waste will not be approved for retort. If the generator does not provide certification, the waste must be tested for total organic compounds and total semi-volatile compounds. Wastes exhibiting a toxicity characteristic of s. NR 661.24 WAC for an organic constituent will not be accepted for retort. Hazardous wastes listed in Subchapter D of chapter NR 661 WAC because it is listed for an organic constituent, as identified in Appendix VII of NR 661, will not be accepted for retort.

Waste Handling

Hazardous waste containers retained in the TSDf are kept closed and sealed to ensure minimal vapor escape and to prevent spillage if the containers were accidentally overturned. Drums (85-gal and 55-gal) are sealed tightly with a top head and bolt ring or a bung cap. Other intermediate sized containers are sealed with tight-fitting lids (e.g., metal, plastic, and polyethylene). Drums and containers are checked for proper sealing immediately upon receipt into the TSDf and on a weekly inspection as part of the inspection and record keeping procedures. Containers holding ignitable or reactive waste are located at least 50 feet from the facility's property line. Drums and containers are opened in the TSDf when a representative sample is required for verification of properly manifested waste, or when adding or removing (e.g., bulking) waste to the drum. Drums and containers are opened with non-sparking tools (e.g., brass bung wrench) to prevent ignition of flammable vapors. Drums and containers such as lab packs may be repacked into larger sized containers or different material type containers (e.g., fiber vs. metal) to facilitate proper and economic disposal at off-site RCRA disposal sites. The inside containers of lab packs (e.g., reagent bottles) may be consolidated or commingled. Lab packs from different generators may be repackaged or commingled in the same outside container and re-profiled as TSDf generated waste. The TSDf record keeping procedures will track the status of each individual container during storage and to the final off-site RCRA treatment disposal site.

Handling of drums through the TSDf is done through use of a drum cart or forklift. Handling in this manner minimizes the possibility for drum rupture or spilling. Other smaller volume containers are carefully handled in an upright position to prevent leakage from the lid area. Storage of drums and containers is completed according to proper segregation into the appropriate storage rooms and pods. These drums will be segregated in accordance with DOT requirements. In order to allow for the unobstructed movement of personnel, fire protection equipment, spill control equipment and decontamination equipment to any area of the facility in an emergency, an aisle space of at least 24-inches will be maintained in the storage pods. The 24-inches of aisle space is based on the approximate diameter of a 55-gal drum. If a drum was found to be leaking, it could be removed without having to move other drums. Alternatively, a 55-gal drum could be easily brought into a pod, in order to transfer the contents of a leaking drum to a new drum.

The TSDf also handles containers smaller than 55-gal drums. Spacing is maintained between the containers so that an inspection can be made for possible leaks. No drums or intermediate sized containers are stored in walkways, doorways, or adjacent building areas. When cubic yard boxes, bags, and pallets are stored inside a pod, the aisle space is increased. An increased aisle space allows for the movement of pallets for access to any leaking containers. Smaller containers may be stored on top of larger containers in a manner that prevents accidental tipping.

Container Storage – License # 6008

The TSDf is divided into three separate hazardous waste storage rooms (see table 1 below). The three hazardous waste storage rooms have a total surface area of approximately 2,498 square feet (sf). Only containers (no tanks) of hazardous waste are stored in the rooms. The maximum hazardous storage capacity is 19,787 gallons. Containers stored inside the hazardous storage rooms typically range in size from less than one-pint bottles

packaged in Department of Transportation (DOT) approved boxes up to DOT approved cubic yard boxes on a pallet. Containers are properly covered and sealed to eliminate air emissions or leakage of waste.

The hazardous waste storage rooms were constructed in 1989 in accordance with the National Fire Protection Associated (NFPA) "Liquid Warehouse" standard for flammable liquids. The Department approved the design of the storage rooms during the TSD's initial licensing activities. The rooms consist of 4-hour fire prevention concrete walls, ceiling, and floor. The storage of ignitable and reactive waste are located at least 50 ft. from the property line. The storage of hazardous waste containers, which are incompatible with other wastes or materials, are segregated in separate rooms and/or separated by berms or walls.

Each hazardous waste storage room has a continuous base, sealed, concrete floor and is divided into pods that are segregated by floor, sealed concrete berm. The front area of the pods has a raised walkway to allow for the removal or placement of hazardous waste containers. This walkway in itself serves as a berm in front of each pod. Although the concrete floors of the storage pods are sloped to facilitate drainage, containers are stored on a raised steel grate to prevent contact with any freestanding liquid within each pod that may occur from a spill. The steel grate is level with the sub room entrances. In addition, a portable peristaltic pump is retained in the facility for emergency removal of spilled hazardous wastes. Sections of the steel grate would be removed to gain access to the spilled material. Spilled material would be contained and moved away from the contaminated area until the spill could be mitigated. The spilled waste will be removed and analyzed from the containment area in a timely manner to prevent overflow.

As described in table 1, the capacity of the secondary containment system in each pod is greater than 10% of the volume of the containers or the volume of the largest container, whichever is greater. With the exception of containers of F020-F023 and F026-F027 wastes, containers without free liquids are not considered for the capacity limits.

Storage Rooms 1 and 3 have two access points each. One access is to the outside and the other to the loading dock area. Storage Room 2 has three access points for Pods 2A and 2B. Pod 2C has two access points. The access points for Room 2 are from the loading dock area and the area east of the mercury retort room. Access points are equipped with a fire door and are only accessible to authorized VESTS personnel.

Storage Room 1 is divided into two pods segregated by floor sealed 3.5-inch (in.) high concrete berm. Each pod has 3.5-in. deep raised entrances that serve as berms. Storage Room 1 contains a sub room constructed with a 2-hour fire prevention concrete walls, door, ceiling and floor.

Storage Room 2 is divided into three pods. Pods 2A and 2B are segregated by floor sealed 6-in. wide and 2-ft high concrete wall. Pods 2B and 2C are segregated by a floor sealed 6-in. wide and 3.5-in. high concrete berm. The area comprising Pods 2A and 2B pod have three access points. Pod 2C has two access points.

Storage Room 3 is divided into six pods segregated by floor sealed 6-in. wide and 2-ft high impervious concrete walls

Table 1: Hazardous waste container storage summary

License Number	Unit Description	Sub Unit Description	Storage Capacity (gallons)	Storage Area (sf)	Secondary Containment Capacity (gallons)	Percentage of Storage Volume (%)
6008	Storage Room 1	Pod 1A	3,575	360	785	22
		Pod 1B	2,145	232	507	24
		Sub room	501	68	148	30
	Storage Room 2	Pod 2A	2,530	394	860	34
		Pod 2B	2,860	400	873	31
		Pod 2C	2,475	336	733	30
	Storage Room 3	Pod 3A	935	98	214	23
		Pod 3B	840	95	207	25
		Pod 3C	746	98	214	29

		Pod 3D	1,100	117	255	23
		Pod 3E	980	114	249	25
		Pod 3F	1,100	118	257	23

Tanker and Roll-Off Bulking

Liquid drums to be bulked into tankers are stored in the storage pods. Prior to pumping, the drums are moved to the loading dock area. The storage pods are designed to be able to contain a minimum of 10% of the total volume of wastes stored and on average are designed to contain 30% of the volume stored. The loading dock area is comprised of a continuous base concrete slab designed to contain any spills that would occur during loading/unloading procedures. The floor is designed to slope away from the doors so as to prevent any spills from escaping the building. The tanker will be parked in the south loading dock area during the bulking operation. A portable collection basin is placed under the hosing connections prior to conducting the bulking operation to collect any incidental residue from hosing connections or disconnection. The existing trailer parking area is comprised of a concrete slab, sloped to aid in spill containment. At the base of the slope is a drain trench. The drain trench has been sealed and the outlet is locked closed. If a spill were to occur, the spill would be contained in this area and would be pumped into the vacuum truck. The transport tankers will then be placed directly into transport for off-site disposal. The bulking of hazardous waste drummed solids into roll-off box occurs in the south loading dock. The floor of the area is concrete and is able to contain any spilled solids. Spilled solids can be simply swept up and placed into the roll-off. The roll-off box will be placed directly into transport by manifesting the waste to the off-site disposal location.

Treatment – License # 4585 as of October 1, 2015

During the issuance of the August 7, 2012, call-in letter, the Department suggested to VESTS, that VESTS should consider licensing their retort ovens due to MEBA. The Department explained to VESTS, that if there is no market for mercury, then the retort ovens would likely no longer be eligible as an exempt hazardous waste treatment unit. Although a market currently exists for the mercury recovered in these units, VESTS agreed to include these units in the FPOR as it is possible that the market conditions for mercury will change within the next ten years. The licensing of these units will not restrict VESTS from marketing the recovered mercury as long as a market exists that is in compliance with the requirements of MEBA. The effective date for the initial licensing of these units as miscellaneous treatment units will be October 1, 2015.

Description of Units

Three (3) mercury reclamation/recovery retort units are located in the western section of the building. The room is in a portion of the originally constructed and permitted facility. The retort room is a segregated 2,070 sf. room. The room is constructed of an impervious concrete floor, concrete block walls and built-up roof. The room has an isolated ventilation system, which collects and controls the fugitive mercury emissions from the retort room. The mercury recovery/retort room is used to unpack, sort, process and retort mercury-contained devices, mercury containing compounds and solutions, and mercury contaminated debris.

The retort units are identified as R3, R4, and R5. The retort units' sources and control devices are covered under a Department Pollution Control Operating Permit and Wisconsin Regulations s. NR 439.11 WAC. On August 31, 2009, VESTS submitted a Renewal Application for the Air Pollution Control Operation Permit 01-DJH-339-OP and identifies the operations as the following processes (P), stacks (S), control devices (C) and fugitive emissions (F).

- P10: RipSys Retort Natural Gas fired Oven (R3) equipped with a scrubber reservoir/packed column condensing system using chilled water to condense the mercury. Sulfur-impregnated carbon adsorber (C09) collects the mercury vapor not trapped by the condensing system. The air emissions then discharge through the process stack (S11) to the retort room stack (S14) equipped with sulfur-impregnated carbon adsorber (C10). The natural gas combustion by-products from P10 discharge through flue stack (S12).
- P11: Magna Drum Retort Natural Gas fired Oven (R4) a scrubber reservoir/packed column condensing system using chilled water to condense the mercury. Sulfur impregnated carbon adsorber (C09) collects the mercury vapor not trapped by the condensing system. The air emissions then

discharges through the process stack (S11) to the retort room stack (S14) equipped with sulfur-impregnated carbon adsorber (C10). The natural gas combustion by-products from P10 discharge through flue stack (S13).

- P14: Wisconsin Oven Corporation Natural Gas-fired Retort Oven (R5) equipped with three in series condensers chilled with propylene glycol to condense the mercury. Sulfur impregnated carbon adsorber (C11) collects the mercury vapor not trapped by the condensing system. The air emissions then discharges through the process stack (S15) to the retort room stack (S14) equipped with sulfur-impregnated carbon adsorber (C10).
- F99: The fugitive emissions from the retort room (F99) discharge through the retort room stack (S14) equipped with the Waterlink Barnebey Sutcliffe HECA-500- 24/CB11 Carbon Absorber (C10)

RipSys (R3) and Magna Drum (R4) Retort Natural Gas Fired Ovens (P10 and P11)

Retort units R3 and R4 are natural-gas heated chambers. Both oven chambers (P10 & P11) are used to process the drummed mercury contaminated wastes including phosphor powder generated during the lamp recycling operations; soils; sulfur-impregnated activated carbon; and mercury contaminated sludge. In addition, scrap metals contaminated with mercury; neon, UV and HID contaminated lamps and glass may be processed in drums or a specially designed kettle in P11. The restrictions to the types of mercury-contaminated debris acceptable for retort processing is described in the FPOR. The process of reclaiming the elemental mercury is accomplished by heating the closed drums or kettle in the convection heated chamber to a temperature sufficient to volatilize the mercury contained in the waste. A vacuum is applied to the drums or kettle during heating. The mercury vapors are then condensed with water in a scrubber and packed tower. The liquid mercury accumulates in the condenser tank and then transferred into a metric ton keg. Once the keg is full, the mercury is marketed. The retort time cycle for P10 and P11 depend upon the type and composition of the waste materials. Sulfur-impregnated carbon adsorber (C09) collects the mercury vapor not trapped by the condensing system. The air emissions then discharge through the process stack S11 to the retort room stack (S14) equipped with sulfur-impregnated carbon adsorber (C10). The natural gas combustion by-products from P10 discharge through flue stack (S12).

P14 One Natural Gas Retort Oven (R5) (Wisconsin Oven Retort System) which replace two Electric Ovens (P12)

One other mercury reclamation/recovery retort unit is located in the retort room. This unit, R5, (P14) is a natural gas fired retort oven (Wisconsin Oven Retort System) and replaces Process P12 (two ASE MR25 Retort Ovens, R1 and R2). The facility should not impact the mercury emissions as the mercury condensing system previously used on Process P12 will be used on Process P14 by the facility (see Mercury emissions values from Stack S14 in the “Emissions from New Equipment or Modification” and “Emissions from Existing Equipment” sections later on in this document in which the Mercury emissions values are the same). Air quality permits 13-KB-181 and 246076050-S01 establish emission limitations and emission control equipment operating parameters. In accordance with current air pollution control regulations and the air quality permit application review, these mercury emissions controls are not subject to “best available control technology.”

Mercury containing devices (e.g., gas regulators), mercury-containing articles (e.g., switches and batteries), mercury-containing glass products (e.g., thermometers), mercury-containing lamps (e.g., HID), mercury-bearing compounds (e.g., mercuric oxide), and mercury contaminated debris (e.g., PPE) are processed in specially designed kettles. Based on the physical and chemical characteristics of the material, it may be loaded into trays which are then loaded into the kettles. This process (P14) is also capable of processing materials in drums in the same manner as the above described ovens. The restrictions to the types of mercury-contaminated debris acceptable for retort processing is described in Section 6.2. The process of reclaiming the elemental mercury is accomplished by heating the oven chamber to a temperature sufficient to volatilize the mercury contained in the waste. A vacuum is applied to the containers within the oven, either a retort kettle or drums, during heating. The mercury vapors are then condensed inside a series of vacuum chambers lined (condensers) with tubes containing propylene glycol. The liquid mercury accumulates in the condensers and is then transferred into a metric ton keg.

Once the keg is full, the mercury is marketed. The retort time cycle for P14 depends upon the type and composition of the waste materials. Sulfur-impregnated carbon adsorber (C11) collects the mercury vapor not trapped by the condensing system. The air emissions then discharges through the process stack S11 to the retort room stack (S14) equipped with sulfur-impregnated carbon adsorber (C10).

Retort Room Fugitive Emissions (F99)

The room has an isolated ventilation system, which collects and controls the fugitive mercury emissions generated during opening containers, de-packing containers, and sorting debris and devices prior to retorting in the retort room (F99). These emissions are captured by a 5,000 cfm blower, which pulls the air emission through a pre-filter, a HEPA filter, and the 7,700 pounds of sulfur impregnated carbon contained in the Waterlink Barnebey Sutcliffe HECA-500-24/CB11 Carbon Absorber.

Operation of Units

The above sources and control devices are covered under a Department Pollution Control Operating Permit 246076050-S01 (issued by the Department's Air Management Program) which adopts construction permits 01-DJH-339-OP, 01-DJH-339-OP-R, and 13-KB-181. The TSDF's Malfunction Prevention and Abatement Plan (MPAP) has established inspection, maintenance and corrective action procedures necessary to ensure the air pollution control devices are operating properly. The control devices and the MPAP prevent release to the atmosphere.

Under Operating Permit 246076050-S01, the air emissions from consolidated stack S14 are monitored daily with a mercury vapor monitor such as the Arizona Instruments Jerome 431X portable mercury monitoring unit. The mercury vapor monitor sampling tube is inserted into an opening to the stack and the internal sampling pump on the meter draws a sample which passes over or through a detector and the unit calculates a concentration of mercury in the air stream. The result is displayed on the unit and the result is recorded on the air monitoring logs maintained by VESTS. VESTS also has a Mercury Instruments VM3000 meter for back up monitoring. The Jerome 431X and VM3000 units are sent annually for certification and calibration. These records are available for review at the VESTS. The pressure drop across the Waterlink Barnebey Sutcliffe HECA-500-24/CB11 Carbon Absorber is measured daily by reading the magnihelic gauge. The reading is recorded on air monitoring logs maintained by VESTS.

Annually, VESTS submits to the Department an Air Emissions Inventory Summary Report summarizing and presenting the overall mercury emissions.

Several waste streams and by-products are generated as a result of the mercury retorting operations, including:

- Post retort phosphor powder
- Post retort debris/devices
- Mercury
- Unprocessed debris with unrecoverable mercury content (e.g., empty pails)

One sample per month is collected from a batch of post retort phosphor powder and analyzed for total and TCLP mercury content. The post retort phosphor powder maybe accumulated as a commercial product and sold for rare earth recovery or is managed as a solid waste for disposal. Post retort debris/devices is sampled on batch basis and analyzed for total and TCLP mercury content. Post retort debris/devices will be managed for underlying constituents and waste codes as necessary (e.g., leaded glass from neon lights).

The mercury reclaimed from the operations may be shipped off-site for further purification or direct reuse. If a reuse alternative does not exist for the mercury, the facility will declare the mercury to be a waste and manage the mercury in accordance with the requirements the Mercury Export Ban Act. The unprocessed debris with unrecoverable mercury will be shipped off-site for microencapsulation as a D009.

- Other wastes are generated from the operations. The type of waste and how they are managed are described below:
- Mercury contaminated carbon, pre-filters and High-Efficiency Particulate Absorption (HEPA) filters are accumulated in drums and then processed through the retort ovens to recover the captured mercury.
- Mercury contaminated waters are accumulated in drums and shipped off-site of disposal.

Household Hazardous Waste

VESTS operates a Permanent Collection Facility under chapter NR 666 Subchapter HH, whereby local residents can dispose of wastes such as pesticides and herbicides, used paint thinners, paint and household batteries. Household Hazardous Wastes (HHWs) are principally collected/accepted at VESTS in a designated HHA area. The majority of the HHW are packaged in their original containers into DOT approved shipping containers. In some instances, HHWs are consolidated or commingled into other hazardous waste streams, as appropriate. This consolidation or commingling occurs in the storage pods. The resulting container is then stored in the permitted storage pods.

Universal Waste

Universal waste destined for processing at the VESTS is stored in the hazardous waste storage rooms and may include batteries, thermostats, mercury-containing lamps, mercury-containing articles, and mercury-containing devices. The universal wastes is stored or packaged in accordance with the DOT regulations. Containers range in size from less than a quart in size to as large as a DOT specification cubic yard boxes. Some universal wastes may be manifested to the facility, but the majority of the universal waste will be received by the facility on bill-of-lading or other shipping papers.

The majority of the projected volumes and weights of universal wastes to be stored within the hazardous waste storage rooms will be mercury containing thermostats and equipment. However, these universal wastes may also include mercury-containing lamps. The largest percentage of these lamps will be four (4) foot fluorescent lamps. Each four-foot lamp weighs 0.62 pounds, which equates to approximately 0.075 gallons and will be used as a conversion factor for all lamps stored in the area. The other universal waste will be weighed and converted to gallons using a specific gravity of 8.34 lbs/gal. Accumulation times for stored universal wastes will vary. However, the maximum storage period is one year.

Fluorescent Light Recycling

VESTS operates two fluorescent lamp recycling units at the facility. One of the fluorescent lamp recycling units includes a CFL feed system which separates the lamp portion of the CFL from the electronic base. The recycling operation recovers the fluorescent lamp components, including glass, aluminum, electronic bases from compact fluorescent lamps (CFL) and mercury bearing phosphor powder. The two lamp recycling machines are located in the northern section for the building. The waste streams generated from the fluorescent light recycling operations including:

- Lamp glass
- Lamp aluminum end-caps
- CFL electronic bases
- Pre-retort phosphor powder

One sample per month is collected from both the lamp glass and lamp aluminum end-caps and tested for TCLP mercury and total mercury concentrations. Analytical data, for the period of January 2012 through December 2014, for the glass and aluminum end caps was submitted by VESTS and is included as Appendix X to the FPOR. The CFL bases are tested annually for TCLP mercury and total mercury. The pre-retort phosphor powder is accumulated into 55-gallon drums and then retorted on-site. Mercury contaminated carbon, pre-filters and HEPA filters are accumulated in drums and then processed through the retort ovens to recover the captured mercury.

The lamp processing sources and control devices are covered under air quality permit 246076050-S01.

Used Oil Management

VESTS accepts used oil at the facility for storage and transfer and is classified as a Used Oil Transporter and Transfer Facility. The used oil is stored in 55-gal drums on skids equipped with secondary containment. The used oil may be pumped to a tanker for transport and recycling at an off-site facility.

Nonhazardous Solid Waste Storage and Processing – License 3870

VESTS conducts non-hazardous solid waste storage and processing at the facility. Operations include recontainerization, phase separation, and solidification in drums. Details of the solid waste operations are presented in the August 22, 2001, Plan Modification to the Plan of Operation for the facility as submitted to the Department. The VESTS non-hazardous solid waste storage and processing was originally approved by the Department on September 18, 1995 and was subsequently modified on August 26, 1997 and on December 8, 1997.

Stormwater - S067857-3

Storm water run-off from the facility is covered by VESTS Storm Water Pollution Prevention Plan (SWPPP) and is written in compliance for Wisconsin Pollutant Discharge Elimination System (WPDES) general permit for Tier 2 Industrial Facilities, permit S067857-3. Surface water from the southern asphalt paved area (approximately 2.7 acres) flows into the catch basins located in the center of the parking lot and directly east of the office building. Surface water runoff that is collected in the main storm sewer is routed north and discharges into a wetland located on the northern portion of VESTS property. The discharge flow in the sewer is controlled by valve located east of the building. The valve remains normally closed and is only manually opened to allow for drainage into the wetland. The wetland drains in the northeast corner of the property along Mineral Springs Drive.

Two stormwater laterals connect into the storm sewer. One lateral is from the trench drain located in the covered south loading dock area of the facility. This trench drain has been sealed and locked. The other lateral is from the roof drains of the office building and the southern portion of the facility (approximately 12,600 sf).

Two roof drains are associated with the middle-north portion of the facility (approx. 3,600 sf), lamp feed station area. One drain discharges to the paved surface on the northeast corner of the building. The second drain discharges to a grassy area northwest of the building.

The storm water runoff from the northern asphalt portion of the site (approximately 16,000 sf) sheet drains to a natural area to the north. The remaining portions of the site consist of landscaped grassy areas surrounding the building and outside the fenced area to the south along the road ways. An un-landscaped, natural area and the retention pond comprise approximately 6.9 acres of the northern portion of the site. Storm water in these areas directly infiltrates soil.

The active portions of the site are graded to minimize offsite drainage from entering the site. The active portions of the site are sloped to contain all storm water within the site boundaries. According to VESTS, erosion does not occur at the site.

Wisconsin Pollutant Discharge Elimination System - S067857-3

On August 15, 2014, VESTS filed a notice of intent for an Industrial Storm Water Discharge General Permit WI-S067857-3, Wisconsin Pollutant Discharge Elimination System (WPDES) Permit for the discharge of storm water.

Laboratory – 246076050

In order to support the WAP, the TSDF maintains a laboratory certification (ID No. 246076050) in accordance with the applicable requirements of chapter NR 149 WAC. Representative samples of wastes are screened for key parameters and are submitted to the laboratory. The waste is analyzed in reference to the methodology outlined in Table 6-3 of the FPOR. These include pH, water reactivity, flashpoint, free cyanide, free sulfide, oxidizing agent, and visual check of physical characteristics. These analytical parameters identify:

- The ignitability or reactivity of the wastes.
- The incompatibility of the wastes.

- Those parameters that best indicate changes in waste characteristics.

The representative sample will be returned to the original container, as identified by inventory or waste stream number. If the sample was collected from a lab pack, the sample jar will be added to the lab pack and reflected on the inventory list for the lab pack.

Air Pollution Control Permits

The facility has replaced the existing Process P12, ASE Retort Ovens with a natural gas fired Retort Oven, Process P14, since last relicensing. This unit was approved by the Department's Air Management Construction Permit number 13-KB-181. The process gases from the ovens and condensers are directed to the existing Control Device (C11) and discharge through Stack S15 to the retort room. From the retort room the emissions from Process P14 are directed to the existing Control Device (C10) and discharge through Stack S14. Flue gas exhaust discharges through a Stack S17. Because the maximum theoretical emissions of mercury exceed the s. NR 445.07, WAC threshold values, the project required a construction permit. VESTS has the following emission units:

- P01: Model 2000 Lamp Recycler, equipped with a Donaldson – Torit TD Cartridge Filter System (C01) and carbon adsorber (C02) and discharges to Stack S01. This unit has a capacity to process 2,500 four foot (T12 – 1.5” diameter) lamps per hour.
- P08: Model LSSI Lamp Recycler equipped with a HEPA PM Collector (C04) and carbon adsorber (C05) and discharges to Stack S08. This unit has a capacity to process 4,000 four foot (T12 – 1.5” diameter) lamps per hour.
- P10: RipSys Retort Oven equipped with electronic with electronic afterburner (C07) and carbon adsorber (C09) and discharges through process Stack S11 to retort room. Flue gas goes to flue Stack S12.
- P11: Magna Drum Retort Oven equipped with electronic afterburner (C08) and carbon adsorber (C09) and discharges through process Stack S11 to retort room. Flue gas goes to flue Stack S13.
- P14: Natural gas fired retort oven by Wisconsin Oven Corporation replacing P12 ((two ASE MR25 Retort Ovens equipped with a carbon adsorber) equipped with a carbon adsorber (C11) and discharge through process Stack S15 to retort room
- P13: Generac SD500 Emergency Generator (Diesel fuel fired) which discharges through Stack S16.
- S14: Retort room Stack equipped with a carbon adsorber (C10) controlling discharges from process Stacks S11 and S15, and F99 (fugitive emissions from retort room).

NR 664 Subchapter AA Standards

Subchapter AA standards apply to air emissions from process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction or air or steam stripping operations that manage hazardous wastes with organic concentrations of at least 10 parts per million weight (ppmw). VESTS does not have any equipment subject to subchapter AA standards.

NR 664 Subchapter BB Standards

Subchapter BB standards apply to air emissions from equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight. There are specific monitoring and reporting requirements based on the type of equipment. However, applicable equipment that contains or contacts hazardous waste for less than 300 hours per calendar year is excluded from the inspection and monitoring requirements of these standards. VESTS does not have any equipment subject to subchapter BB standards.

NR 664 Subchapter CC Standards

Subchapter CC standards apply to air emissions from tanks, surface impoundments and containers that manage hazardous wastes containing an average organic concentration of greater than or equal to 500 ppmw at the point of waste origination. Containers of hazardous wastes that are transferred through the facility that are still in the course of transportation are exempt from subchapter CC. Specific exemptions to these requirements are outlined in NR 664 subchapter CC WAC.

Containers typically received and managed at this facility include, but not limited to 5 gallon, 15 gallon, 30 gallon, 55 gallon and 250 gallon containers. These containers typically meet applicable DOT specifications and/or authorizations. Containers greater than 26 gallons that are managing site generated hazardous waste are visually inspected upon their initial filling and within one year if the container is not completely emptied of its contents. Containers less than or equal 121 gallons are acceptable for use in accordance with Level 1 controls. Containers greater than 121 gallons are acceptable for use in accordance with Level 2 controls. Hazardous waste containers less than 26 gallons in capacity or hazardous waste in a vacuum truck are exempt under subchapter CC. Stabilization of waste in containers does not occur at the facility.

Traffic Information

The principal travel route for trucks traveling to the TSDF is from Wisconsin State Highway 32 (Spring Street) located west of the TSDF. From Spring Street, truck traffic will take Maritime Drive to the east and turn north onto Mineral Springs Drive to the facility. Normal truck routes to and from the TSDF are shown on Figure 2-5.

Current traffic volume counts for the area near the TSDF have been recorded by the Wisconsin DOT for Annual Average Daily Traffic (AADT). The nearest volume count locations included Sunset Road (County Highway CC) west of County Highway C (1200 AADT), Sunset Road east of State Highway 32 (2200 AADT), State Highway 32 south of Sunset Road (7200 AADT), and State Highway 32 south of Maritime Drive (10,100 AADT). Based on an average of 15 trucks per day visiting the TSDF, the facility traffic volume is a relatively small portion of the AADTs for the surrounding area.

A typical cross-section of the roadways near the TSDF is shown as Figure 2-6 in the FPOR. According to the Port Washington Public Works Department, the roadways near the TSDF do not have weight or bearing capacity restrictions.

The traffic routing at the TSDF consists of entering and exiting from Mineral Springs Drive through a security gate and loading or unloading at the necessary location at the facility. A truck parking area is used in the southeast corner of the facility for off-duty vehicles. Truck activities are concentrated to and from the loading dock area on the north and south sides of the TSDF. Personal vehicles use the same entrance to the site as trucks, but park in designated parking areas along the edge of the asphalt in the northeast corner of the facility.

The driveway areas of the TSDF, including the parking areas and loading dock drive area, are constructed of asphalt. The construction of these areas included a 3-in. layer of asphalt covering 8-in. thickness of ¾-in. crushed limestone, treated with a traffic binder. The load bearing capacity of the asphalt pavement is 3,000 psf.

Service Area

VESTS, through its licensed hazardous waste facilities, provides hazardous waste services to generators of hazardous wastes, including small and large industries, commercial operations, retail stores, remediation contractors, and local, state and federal government agencies across the United States. The TSDF's service area includes Wisconsin, Minnesota, Illinois, Indiana, Michigan, Ohio, Iowa, Kentucky, Nebraska, Missouri, Kansas, North and South Dakota. The TSDF affords the generators in Wisconsin and EPA Region V an economical waste disposal alternative, promotes the regulatory compliance, and provides a well-managed and secure method for managing wastes.

On-Site Hazardous Waste Generation

Wastes generated by VESTS's operations include empty containers, laboratory wastes, absorbents, contaminated PPE, clean-up wastes and spills of wastes.

FPOR Licensing History 1989

The first EPA RCRA Part A hazardous waste license application for the facility was submitted to the WDNR on October 9, 1987, by then owner Aqua-Tech, Inc. Subsequently, Aqua-Tech received the first Hazardous Waste Operating License on December 27, 1989, for a storage facility with a maximum storage capacity of 10,000 gallons. The license duration period was a fixed term not-to-exceed 10 years from the date of issuance, which

ended December 27, 1999. During the term of the first operating license, the TSDF was issued, modifications of ownership including from Aqua-Tech to Mineral Springs Corporation (September 23, 1991) and to Superior Hazardous Waste Group, Inc. (September 30, 1993). On October 31, 1996, the WDNR approved a Class 1 Modification associated with the name change of the company to Superior Special Services, Inc.

FPOR Relicensing History 1999

On May 27, 1999 the FPOR was submitted as part of the application for the second operating license for the TSDF. On May 17, 2001, the WDNR issued a NOI letter associated with the May 27, 1999, FPOR submittal. Subsequent responses were made by Superior on September 10, 2001, and September 13, 2001, and to the US EPA on February 14, 2002, and February 27, 2002. The WDNR issued a second notice of incompleteness on March 25, 2002. Responses were submitted on May 14, 2002, and July 11, 2002. On December 26, 2002, a Class 1 plan modification for a name change from Superior to Onyx Special Services, Inc. was issued by the WDNR. A notice of completeness and a preliminary determination was issued by the WDNR on July 15, 2003. On September 17, 2003, the WDNR determined that an environmental impact statement was not needed for the FPOR changes. On September 25, 2003, the WDNR issued the Final Determination to Conditionally Approve the FPOR. On February 6, 2004, the WDNR issued the second Hazardous Waste Operating License #6008 for Container Storage Facility to Onyx Special Services. The license duration period for the second license was a fixed term not-to-exceed 10 years from the date of issuance to February 6, 2014.

Past Department Hazardous Wastes Decisions

Since the original FPOR approval was issued, a number of approvals, determinations and modifications have been issued to the facility. The dates and a summary of the approvals, determinations and modifications are listed in table 2.

Table 2: Past Department Hazardous Waste Decisions

Date of Decision	Description of Decision
December 27, 1989	Original FPOR approval.
September 23, 1991 to June 28, 2006	Class 1 Modifications for name changes from Aqua-Tech, Mineral Springs Corporation, Superior Hazardous Waste Group, Inc., Onyx Special Services, Inc., Onyx Environmental Services, L.L.C., Veolia ES Technical Solutions, L.L.C.
May 27, 1992	Expanding the maximum storage capacity of the facility from 10,000 gallons to 20,000 gallons.
June 1992	Addition of bulking and containerization operations.
January 27, 1997	Class 2 Modification regarding the addition of newly listed waste codes that were published in the EPA final rule in the February 9, 1995, Federal Register.
June 18, 1998	Class 1 Modification to add 12 waste stream to the list of waste.
November 13, 1998,	WDNR issued a call-in letter.
May 17, 2001	“Notice of Incompleteness” (NOI) letter associated with the May 27, 1999 FPOR
March 25, 2002	second notice of incompleteness
September 17, 2003	WDNR determined that an environmental impact statement was not needed for the FPOR changes
September 25, 2003,	Final Determination to Conditionally Approve the FPOR
February 6, 2004,	WDNR issued the second Hazardous Waste Operating License #6008 for container Storage Facility to Onyx Special Services
July 16, 2012	WDNR issued an acknowledgement of the modification update to the FPOR – Contingency Plan
August 7, 2012	WDNR issued a call-in letter to begin the renewal process for the third hazardous waste operating license
January 17, 2013	WDNR issued a Request for Relief on the One Year Storage Limitation for Elemental Mercury (pertaining to the Mercury Export Band Act of 2008 MEBA)

Past Environmental Analysis

An analysis of the need for an environmental impact statement (EIS) was performed by the Department as part of both the first (1990) and the second hazardous waste licensing on September 25, 2003. The analysis of the expected impacts of the proposal for the initial facility concluded that it was not a major action that would significantly affect the quality of the environment. As such, an environmental impact statement was not required for the initial license issuance for the current facility. The environmental review associated with this preliminary determination updates the original EA completed on September 25, 2003 and confirms that an EIS is not needed.

Closure

VESTS expects to operate the facility for the foreseeable future. The FPOR includes a detailed closure plan and cost estimates for completing closure of the entire facility. The closure plan includes the cost estimates of the money needed to remove the maximum allowable quantity of hazardous waste stored at the facility and decontamination procedures for all of the surfaces and equipment in the licensed container storage and the mercury recovery/retort operation – miscellaneous unit. The current cost estimate to close and decontaminate the hazardous waste facility covered by this determination is \$615,737.70. (see Table 3).

Table 3: 2014 Closure Cost Summary

Unit Name	Cost
Hazardous Waste Inventory	\$ 274,588.35
Closure Debris	\$ 13,196.70
General Decon	\$ 151,160.00
Sample Collection/Lab Analysis	\$ 25,742.00
Report Prep and Certification	\$ 13,710.00
Closure Debris	\$ 41,975.65
Retort Room Decon	\$79,080.00
Sample Collection/Lab Analysis	\$ 5,980.00
Report Prep and Certification	\$ 10,305.00
Total	\$615, 737.70

Corrective Action

When the initial state license and federal permit were issued in 1989, corrective action was not required since there were no known releases. On April 25, 2002, the Department conducted a RCRA Facility Assessment inspection as part of facility RCRA relicensing. As a result of the inspection and additional information in Department files, a RCRA Facility Assessment (RFA) report dated July 3, 2003 was prepared which examined the waste streams at the facility, identified Solid Waste Management Units (SWMUs), documented releases which occurred at the facility, and identified Areas of Concern (AOCs) in accordance with the EPA RFA guidance and Department Waste Management Program Corrective Action Guidance. On October 22, 2003, the Department issued a memorandum indicating the RFA had become final and there were no public comments.

Under Condition 23 of the Department's September 25, 2003, approval entitled "Final Determination to Conditional Approval", the TSDF was required to develop and submit a Work Plan for a RCRA Facility Investigation (RFI) to address the findings of the RFA. On November 25, 2003, the RFI Work Plan was submitted to the Department. On January 6, 2004, the Department issued their approval to the RFI Work Plan.

On June 15, 2004, Montgomery Watson Harza issued a report outlining the initial RFI results and requested approval to complete additional testing. The Department granted verbal approval for the additional sampling on June 21, 2004. The final RFI Report was submitted to the Department on October 19, 2004. In addition, on November 10, 2004, a follow-up letter was submitted to the Department regarding additional sampling results associated with SWMU #9.

The Department's Remediation and Redevelopment Program is working with VESTS to review an updated sampling plan received by the Department on September 6, 2014 (Appendix V of the FPOR), which supplements the 2004 RCRA Facility Investigation. On January 20, 2015, the Department's Remediation and Redevelopment Program issued a letter regarding the soil data submitted by VESTS that included timelines for site investigation. On March 20, 2015, AECOM on behalf of VESTS submitted a work plan for soil investigation in response to the January 20, 2015 letter.

Appendices U and V of the FPOR (Groundwater Detection Monitoring Program and 2014 Sampling Plan Supplement to 2004 RCRA Facility Investigation) are not approved with the attached preliminary determination of the August 6, 2013 (revision date September 6, 2014), but will be addressed through the Remediation and Redevelopment Program investigation process.

Need Analysis

VESTS, through its existing licensed TSDF, provides hazardous and universal waste services to generators of both wastes, including electrical contractors, utilities, small and large industries, commercial operations, and local, state and federal government agencies. The service area routinely covered by VESTS includes the upper Midwest, but provides mercury recovery operations for customers across the United States. VESTS is one of two companies in Wisconsin that provides mercury retort and universal waste services through a licensed TSDF. The TSDF affords the generators in Wisconsin and EPA Region V an economical waste disposal alternative, promotes regulatory compliance, and provides what VESTS describes as “well-managed and secure method for managing wastes.”

Since 1990, when the TSDF began operation, the hazardous waste collection, transportation, and disposal industry has consolidated and many firms have gone out of business. While waste minimization efforts by generators have reduced the overall volume of waste requiring storage, and ultimately treatment and disposal, VESTS recognizes their services are still needed by the regulated community. VESTS has advanced its capabilities to service the generators of universal waste. The facility has changed over the years through independent submittals to the Department to cover the regulatory aspects of managing and recycling universal waste. In order to fulfill the generators’ needs, VESTS is seeking a license to continue the operation of the existing TSDF and approval for the modifications of the TSDF to convert existing electric ovens to gas-fired retort ovens. VESTS is not seeking any planned expansions of the TSDF.

Owner Financial Responsibility

The cost estimate for the final closure of VESTS’ hazardous waste storage licensed activities is \$615,737.70. The closure cost estimate must be adjusted annually for inflation. VESTS is required to maintain on file with the Department adequate proof of financial responsibility to cover the cost of closure. Currently VESTS has on file a closure surety bond for proof of financial responsibility needed for closure, which is, as of October 6, 2014, \$406,481.00. VESTS maintains a pollution liability insurance policy for sudden environmental releases of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate. On February 11, 2015, the Department acknowledged receipt of an up to date certificate of liability insurance with an effective date of January 1, 2015.

A cost estimate for VESTS Corrective Action has not yet been determined. VESTS maybe subject to s. 291.37, Wisconsin Statutes if it is determined that corrective action is required. Once it has been determined that corrective action is required, costs estimates will be determined for that corrective action, VESTS will be responsible for complying with s. 291.37(2), Wisconsin Statutes and establish proof of financial responsibility and a schedule to complete the corrective action.

FINDINGS OF FACT

The Department finds that:

1. Veolia ES Technical Solutions, LLC (VESTS) owns and operates a commercial hazardous waste container storage facility and a miscellaneous hazardous waste unit at 1275 Mineral Springs Drive, Port Washington, Wisconsin.
2. The Department issued a Feasibility and Plan of Operation Report (FPOR) determination to Onyx (Veolia ES Technical Solutions, LLC) on September 25, 2003. On February 6, 2004, The Department issued a letter to Onyx confirming completion of the relicensing of the Onyx hazardous waste management container storage facility.
3. On June 27, 2006, the Department received from Onyx a class 1 plan modification request, dated June 27, 2006, to change the name of the Port Washington facility to Veolia ES Technical Solutions, L.L.C.
4. On July 3, 2003, the Department issued a final RCRA Facility Assessment (RFA) on the Onyx Special Services Port Washington facility. Nine SWMUs were identified as: the hazardous waste storage rooms (SWMU #1); the south loading dock (SWMU #2); the north loading dock (SWMU #3); the fluorescent lamp

crushing/processing machine (SWMU #4); the mercury retort area (SWMU #5); the waste glass lugger box areas (SWMU #6); the solid waste solidification area (SWMU #7); the household hazardous waste storage area (SWMU #8); and, the trailer storage/parking lot area (SWMU #9). The AOC is identified as the roof drain (AOC #1). The RFA concluded that Onyx Special Services should conduct an investigation for potential contamination in SWMUs #3, 4, 5, 6, 7 and 9 and AOC #1.

5. The Department received a RCRA Facility Investigation Report from Montgomery Watson Harza on behalf of Onyx Special Services, Inc. dated October 19, 2004, and prepared in accordance with Condition 23 of the Department's September 25, 2003, FPOR approval for the Port Washington facility.
6. On August 7, 2012, the Department issued a call-in letter to begin the renewal process for the third hazardous waste operating license.
7. On January 17, 2013, the Department issued a "Request for Relief for the One Year Storage Limitation for Elemental Mercury."
8. On October 14, 2013, the Department acknowledged the receipt of the Feasibility and Plan of Operation Report that was received on August 14, 2013.
9. VESTS provided the Department addenda to the FPOR and were received on December 6, 2013, and January 27, 2014.
10. On May 6, 2014, the Department issued a Notice of Incompleteness for the FPOR.
11. On August 14, 2014, VESTS provided a letter requesting an extension to providing the items outlined in the May 6, 2014, Department's NOI.
12. The Department performed a financial records review on March 19, 2014.
13. On October 29, 2014, the Department acknowledged receipt of Hazardous Waste Facility Certificate of Liability Insurance at VESTS.
14. A Natural Heritage Inventory (NHI) portal review was conducted by the Department on December 16, 2014, which showed element occurrences of the Forked Aster (*Eurybia furcata*) - Plant and Peregrine Falcon (*Falco peregrinus*) - Bird, within two miles of the facility. Given that the facility is located in an existing industrial setting and that there is no new construction, it is very unlikely that facility operations would impact any of the aforementioned element occurrences.
15. On January 20, 2015, the Department issued a letter regarding soil data submitted by VESTS in October 2004 and a follow-up "Reported Contamination in Soil."
16. On January 23, 2015, VESTS submitted to the Department a response to a request for information dated January 12, 2015.
17. Additional information used by the Department in connection with the June 6, 2013, FPOR:
 - a. On August 14, 2014, the Department received an email and attachment from VESTS requesting an extension to the items listed in the Department's Incompleteness Determination dated May 13, 2014
 - b. On January 23, 2015, the Department received an email and attachment from VESTS with the TCLP and total mercury testing results for end caps and lamp glass.
18. The Department's Environmental Analysis (EA) decision showed that there are no special ethnic or cultural groups in the immediate area nor are there highly sensitive facilities (e.g., schools, hospitals, elder care facilities, child day care) in the immediate area that could be impaired by an air release or a spill from the facility. The EA also showed that the facility is not located in an environmental justice area.

19. On March 20, 2015, the Department determined the FPOR to be complete.
20. On March 20, 2015, the preliminary determination was submitted to VESTS for comment. The Department received comments back from VESTS on March 30, 2015, which are included in this preliminary determination.
21. On April 30, 2015, a class 1 public notice was published in the Ozaukee Press a radio advertisement for the opportunity for public comment was placed with radio station 92.5 WBWI-FM/AM 1470 WBKV on the same date during morning and evening drive times, and public notice was placed on the Department's website at <http://dnr.wi.gov/topic/Waste/Comment.html> that informed the public that the FPOR, the preliminary determination, the initial environmental assessment, the preliminary notice of the reaffirmation of the initial environmental assessment dated April 9, 1986 and the fact sheet are available for review by the public. The first 45-day public comment period ended on June 15, 2015.
22. A second public notice was published in the Wisconsin State Journal, because the Wisconsin State Journal failed to publish on April 30 and published on June 5, 2015 extending the comment period to July 20, 2015.
23. On July 15, 2015 the Department received a letter via email dated July 15, 2015 from Veolia ES Technical Solutions (VESTS) as part of the public comment period which began on April 30, 2015 and was extended to July 20, 2015 on the Department's preliminary determination on the VESTS FPOR. A hard copy was received on July 20, 2015.
24. No other public comments were received by the Department on the draft environmental assessment review associated with VESTS FPOR and the Department's preliminary determination. The Department reviewed the July 15, 2015 comment letter from VESTS and added Condition 45 in the final FPOR, which requires licensing of the miscellaneous units by October 1, 2015.

CONCLUSIONS OF LAW

The Department concludes that:

1. The Department promulgated chs. NR 660 through 670, WAC, establishing minimum requirements for hazardous waste management under the authority of chs. 289 and 291, Wis. Stats.
2. The Department has the authority to conditionally approve a FPOR if the conditions are necessary to ensure compliance with chs. NR 660 through 670, WAC, pursuant to s. 289.30(6), Wis. Stats.
3. Pursuant to s. 289.31, Wis. Stats., and s. NR 670.050, WAC, the Department may issue annual renewals of hazardous waste operating licenses for an effective period of up to ten (10) years. If the licensee chooses to operate or maintain a hazardous waste facility after the ten (10) year effective period ends, the licensee must submit, at least 180 days before the end of the effective period, a new operating license application consisting of a Part A application form, the feasibility and plan of operation report and any supplemental information, as specified in s. NR 670.010(1), (3) and (8), WAC and the applicable sections of chs. NR 660 to 670, WAC.
4. The Department promulgated ch. NR 103, WAC to preserve and protect the water quality of wetlands.
5. Pursuant to s. 289.30(6), Wis. Stats., and ch. NR 670, WAC, the Department has the authority to issue hazardous waste facility plan approvals.
6. The conditions of approval set forth below are necessary to ensure compliance with chs. NR 660 through 670, WAC.

7. Section 291.37 Wis. Stats. and NR 664, Subch. F, WAC authorizes the Department to require corrective action when a release has occurred from a solid waste management unit at a facility.

DETERMINATION

In accordance with s. 289.28(3), Wis. Stats., the Department has determined that there is a need for the facility to store hazardous waste as approved. The Department has further determined that there is no need for an environmental impact report or environmental impact statement for this facility at this time, pursuant to s. 1.11, Wis. Stats., and ch. NR 150, WAC, and that the existing facility conforms to wetlands water quality standards pursuant to ch. NR 103, WAC.

Based on the Findings of Fact and Conclusions of Law, the Department hereby approves the hazardous waste feasibility and plan of operation report for Veolia ES Technical Solutions, LLC submitted on August 6, 2013, December 6, 2013, January 27, 2014, September 6, 2014, and January 23, 2015, subject to compliance with ch. 291, Stats., chs. NR 660 through NR 670, WAC, and the following conditions.

CONDITIONS OF APPROVAL

Veolia ES Technical Solutions, LLC (VESTS) is subject to the following conditions:

General

1. The storage and treatment facility shall be operated in accordance with the approved Feasibility and Plan of Operation Report (FPOR), the requirements of ch. 291, Wis. Stats., chs. NR 660 to 670, WAC, and the conditions of this approval. At the discretion of the Department the approval conditions, Wisconsin Statutes or the Wisconsin Administrative Code shall take precedence over any discrepancies with the FROP.
2. All prior hazardous waste approvals and hazardous waste modifications issued by the Department relating to the operation of the hazardous waste facility at VESTS are hereby nullified or superseded by this approval except for decisions related to corrective action.
3. The Department retains the jurisdiction either to require the submittal of additional information or to modify this approval at any time if, in the Department's opinion, conditions warrant further modifications. Nothing in this conditional approval shall relieve VESTS of the legal obligation to comply with applicable federal, state and local approvals.
4. The conditions set out in s. NR 670.030, WAC, apply to this facility and are hereby incorporated by reference and made a part of this approval and of any operating license which may be issued for the facility based upon this approval.
5. VESTS shall at all times maintain in good working order and operate efficiently all facilities and systems of treatment or control and related appurtenances which are installed or used to achieve compliance with the terms and conditions of the license. Proper operation and maintenance includes, but is not limited to, effective performance based on designed facility removals, preventive maintenance, adequate funding, effective management, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures.
6. The licenses for operating the container storage units and treatment units are subject to the annual renewal of operating license fees listed in Appendix II, ch. NR 670, WAC.
7. VESTS shall comply with all applicable requirements of the Department's air pollution control rules stated in chs. NR 400 to 499, WAC or in applicable federal rules, and directives including but not limited to obtaining all necessary permits to operate in accordance with these rules. VESTS shall notify the Department of any change in operation that results in an increase in the maximum potential emissions of an air contaminant or which results in the emission of an air contaminant not previously emitted.
8. If at any time VESTS becomes aware that there was a failure to disclose relevant facts in any reports, plans, or other documents submitted, or that incorrect information was submitted, VESTS shall promptly submit such facts or correct information to the Department.
9. VESTS shall install and maintain a bonding and grounding system in all areas of the facility where a static discharge could result in a fire or explosion.
10. VESTS shall operate the facility in a manner that prevents discharges from the facility from impacting the facility and the environment.
11. Should a fire, explosion or other incident that requires implementation of the contingency plan occur, VESTS shall do the following:
 - a. Take colored photo documentation of incident.

- b. Identify the employees who have knowledge of, or were involved in the incident.
- c. Retain and secure any data associated with the incident.
- d. Retain and secure any equipment and/or parts that were involved in the incident.
- e. Retain and secure wastes or residues that were involved in the incident.

VESTS shall obtain Department concurrence prior to releasing any items obtained in 11.c - e.

- 12. VESTS shall submit to the Department within thirty (30) days of the date of the final determination (2) two 'clean' printed and bound copies of the FPOR in D ring binders with the spline appropriate labeled.
- 13. VESTS shall keep the retort room under negative pressure using the facilities' air pollution control equipment.

Storage and Treatment Capacity

- 14. VESTS may not store or treat hazardous waste in locations or quantities greater than those stated below:

Table 5: Storage and Treatment Summary

License Number	Unit Description	Sub Unit Description	Unit Type	Capacity Limit
6008	Storage Room 1	Pod 1A	Storage	3,575 gallons
		Pod 1B	Storage	2,145 gallons
		Sub room	Storage	501 gallons
	Storage Room 2	Pod 2A	Storage	2,530 gallons
		Pod 2B	Storage	2,860 gallons
		Pod 2C	Storage	2,475 gallons
	Storage Room 3	Pod 3A	Storage	935 gallons
		Pod 3B	Storage	840 gallons
		Pod 3C	Storage	746 gallons
		Pod 3D	Storage	1,100 gallons
Pod 3E		Storage	980 gallons	
4585	Retort Room	R3	Miscellaneous Treatment	Total treatment capacity is not to exceed 25,000 pounds per day
		R4	Miscellaneous Treatment	
		R5	Miscellaneous Treatment	

- 15. VESTS' maximum hazardous storage capacity is 19,787 gallons.
- 16. VESTS shall keep the maximum through-put into the miscellaneous units (the three natural gas-fired retort ovens, R3, R4 and R5) to no more than 25,000 pounds per day.

Storage

- 17. All hazardous waste storage activities shall be confined to the areas specified for those purposes in the approved FPOR. The only hazardous wastes that can be stored in these areas are the hazardous wastes identified on the most recent Part A notification form dated September 2, 2014. Wastes with similar characteristics, but different hazardous waste codes, may only be managed at the facility after receiving written approval from the Department following a modification to this determination and the submission of a revised Part A application.
- 18. Waste received from off-site shall be processed or moved into a container storage area within twenty-four (24) hours of the hazardous waste arriving at the facility.
- 19. VESTS shall sign off on the uniform hazardous waste manifests within seventy-two (72) hours of receipt of the wastes.

20. Placards shall be used to clearly identify the separate storage rooms (Pod 1A, 1B.. through 3F.) and for the different types of wastes stored, such as poisons, reactives, corrosives, ignitables, PCBs, non-hazardous waste, etc.
21. The identity and location of all stored hazardous waste shall be known throughout the entire storage period.
22. When storing non-hazardous waste containing free liquids in the licensed storage unit the volume of non-hazardous waste shall be accounted for as if it were a hazardous waste (i.e., secondary containment, inspection, license storage capacity).
23. Sufficient aisle space of at least two (2) feet shall be maintained in all of the storage and staging areas to allow for unobstructed movement of personnel and equipment in an emergency and to allow for inspections of the storage area.
24. Sufficient lighting shall be maintained in all of the storage areas to allow for inspections of the storage area.
25. While transferring waste from one container into another container in the licensed storage areas, VESTS shall make sure that adequate aisle space is maintained and the storage capacity is not exceeded.
26. VESTS shall handle batteries in accordance with the U.S. DOT battery packaging regulations.
27. Materials stored in licensed container storage areas shall be compatible with the hazardous waste being stored.
28. Storage of elemental mercury beyond one year shall comply with the requirements contained in the Department's January 17, 2013 letter.

Containers

29. VESTS shall store waste in structurally sound (undamaged) United States Department of Transportation (DOT) approved containers.
30. VESTS shall place containers in storage areas so the labels are visible for inspection at all times.
31. When storing containers two (2) high on pallets, containers of equal or larger size or quantity shall be stored on the bottom level.
32. VESTS shall stack containers in a stable manner so that the containers do not tip over.
33. VESTS shall stack containers no more than two (2) containers high.
34. VESTS shall maintain a minimum of two (2) feet of aisle space.
35. VESTS shall not stack containers when the stacking would compromise the structural integrity of the container.
36. When containers greater than twenty (20) gallons in size are stored two (2) high, pallets shall be used to separate the first level from the second level.
37. Containers shall be covered/closed except when adding or removing wastes.

Roll-Offs

38. VESTS shall cover or keep closed containers or roll-offs stored outside of the TSD facility when those containers or roll-offs contain end caps, glass, plastic, or any materials which have been in contact with phosphor powder except when adding or removing materials to these containers or roll-offs.
39. When transferring waste from a roll-off box into the retort room, VESTS shall provide an adequate secondary containment system and operate in such a way that waste does not spill outside of the secondary containment system.
40. After transferring waste from a roll-off box into the retort room, VESTS shall decontaminate the secondary containment system, the empty roll-off box if it is not going to be used for mercury waste storage within 24 hours and all of the equipment used in transferring the wastes.
41. Inbound and outbound roll-off boxes of hazardous waste shall be inspected for signs of leakage and free liquids. Signs of leakage and free liquids shall be recorded in the in the facility's operating record.

Transfer Facility

42. VESTS may operate an on-site 10-day transfer facility for incoming hazardous waste, provide that VESTS or its contract carrier is only the transporter and is not identified on line 8 on the uniform hazardous waste manifest as a designated facility.
43. VESTS shall not move hazardous waste from an on-site hazardous waste transfer facility to the hazardous waste storage facility or from the hazardous waste storage facility to an on-site transfer facility.
44. VESTS shall clearly mark on all hazardous waste manifests or associated paperwork the date when the hazardous waste is first placed/arrived in the transfer facility. VESTS shall ensure that on each hazardous waste manifest or associated paperwork this date is available for inspection.

Miscellaneous Units Treatment

45. The effective date for the initial licensing of miscellaneous treatment units (R3, R4, and R5 or any subsequent treatment units) at VESTS, shall be October 1, 2015.
46. VESTS shall only process the following hazardous waste in the retort furnaces:
 - a. The hazardous waste does not exhibit the toxicity characteristic in s. NR 661.24 WAC for an organic constituent; and,
 - b. The hazardous waste is not a hazardous waste listed in subch. D of ch. NR 661 WAC because it is listed for an organic constituent as identified in ch. NR 661 WAC, Appendix VII; and,
 - c. The hazardous waste contains less than 5,000 BTU/lb, as-fired, and less than 500 ppm, as-fired, by weight of the organic constituents identified in ch. NR 661 WAC, Appendix VIII; or,
 - d. Hazardous waste that is specifically listed in ch. NR 666 WAC, Appendix XIII that contains recoverable mercury and contains less than 500 ppm, as-fired, by weight of the organic constituents identified in ch. NR 661 WAC, Appendix VIII. Hazardous waste treated under condition 45.d of this approval can exceed 5,000 BTU/lb.
47. VESTS shall not leave untreated mercury containing wastes in retort unit beyond the date on which a completed batch is placed into the unit.
48. VESTS shall keep the door(s) between the oven room and the rest of facility in a closed position when wastes are not being moved between the oven room and rest of the facility.
49. VESTS shall cover/close drums and retort kettles except when adding or removing wastes. Retort trays containing wastes will be placed into retort kettles except when adding or removing waste.

50. VESTS shall label the containers containing the waste that have been through the mercury retorting process with these words or other similar words until analytical results become available: “*Waste Contents Pending Analysis. Date Treated* ___/___/___ (actual date of treatment), *Date of Sample* ___/___/___ (actual date of sample)”.
51. VESTS retort operations shall be under the control of a trained operator. VESTS shall not allow employees to work unsupervised until they have been certified as being fully trained, in accordance with the facility's personnel training plan.

Secondary Containment

52. The secondary containment system within the storage locations shall be operated to prevent any migration of wastes or accumulated liquid out of the system into the air, soil, groundwater or surface water at any time.
53. The secondary containment system within the storage locations shall be capable of containing releases and accumulated liquids until the collected material is removed.
54. The secondary containment system within the storage locations shall be maintained to be liquid tight and free of cracks and gaps.
55. The secondary containment system shall be promptly repaired following discovery of cracks or gaps which may impact the performance of the system.
56. The secondary containment system shall be kept free of debris.
57. All uncontained wastes and liquids located within the secondary containment system shall be removed from the secondary containment system area daily and properly managed and disposed or recycled.
58. VESTS may not store materials or equipment whose volume will adversely affect the secondary containment capacity of the storage or treatment units, other than the equipment considered in the secondary containment system calculations included in the FPOR.
59. If a spill occurs in a containment pallet or on the floor, the containment pallet or floor shall be decontaminated before another type of waste is stored on the containment pallet or floor.

Spill Reporting

60. VESTS shall comply with all applicable statutes and rules relating to spills, leaks, or other releases of hazardous waste or other hazardous substances, including ch. 292, Wis. Stats., ch. NR 664 subch. D WAC and chs. NR 700 to 754, WAC.
61. VESTS shall implement Conditions 62 and 63 of this approval when any of the following conditions occur:
- General spills reporting requirement: If a discharged substance has adversely impacted or threatens to adversely impact the air, lands or waters of the state; caused or threatens to cause acute or chronic human health impacts if immediate actions, such as evacuation or in-place sheltering, are not taken; or presents or threatens to present a fire or explosion hazard or other safety hazard, in accordance with s. 706.05 WAC. The discharge notification form for historic releases can be obtained at the following web address: <http://dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf>.
 - Spills occurring inside the buildings: Greater than five (5) gallons of hazardous materials.
 - Spills occurring outside the buildings and secondary containment on paved areas that drains to the stormwater collection system: Greater than one (1) gallon of hazardous materials.
 - All spills occurring on non-paved areas.
62. VESTS shall provide immediate telephone notification to the Division of Emergency Government (Spills Line - 800-943-0003) when a release is covered by Condition 61.

63. VESTS shall submit a spill report to the Department in accordance with NR 706 and NR664.0056(10). VESTS shall submit the spill report to the Department's designated Hazardous Waste Inspector assigned to VESTS and to the Department's designated Hazardous Waste plan review staff person assigned to VESTS and to the Department's designated Spills Coordinator within fifteen (15) days of incident.
64. VESTS shall submit quarterly reports listing all visible spills of hazardous material greater than one gallon that occurred at the facility over the previous three (3) months. The report shall include the type and quantity of waste spilled, the location of the release, the source of the release, what actions were taken to clean up the release and what actions will be taken to prevent a release from recurring. The quarterly report shall be submitted to the Department's designated Hazardous Waste Inspector by the 15th day of April, July, October and January of each year that VESTS maintains a hazardous waste operating license.

Routine Mercury Monitoring

65. VESTS shall develop and implement a soil and sediment monitoring plan that is acceptable to the Department that will be used to monitor for mercury impacts around the facility. The soil and sediment monitoring plan shall be based on Incremental Sampling Methodology (ISM) and be submitted to the Department within ninety (90) days of the date of this conditional approval. The proposed ISM shall include the following elements:
- a. Sample collection shall be taken from the same decision unit used in the previous sampling event. Proposed decision units shall be included in the plan. If sample collection cannot be taken from the same decision unit used in the previous sampling events, then VESTS shall propose an alternate location to the Department's designated Hazardous Waste plan review staff person assigned to VESTS.
 - b. Sediment grab samples shall be taken from the areas in the retention basin where mercury is most likely to accumulate.
 - c. Soil and sediment samples shall be collected beginning in 2016 and every other year thereafter,
 - d. Sample collection and handling shall be consistent with EPA's Field Sampling Manual SW-846 entitled "*Testing Methods for Evaluating Solid Waste*" and ch. NR 716 WAC.
 - e. Samples shall be analyzed for total mercury using test method SW846/7470A.
 - f. Samples shall be analyzed by a laboratory certified or registered under NR 149 WAC.
 - g. The soil sample results for mercury shall be recorded on a drawing and in a tabular format. The tabular format shall contain at a minimum:
 - i. Decision unit / grid location that the sample was taken from,
 - ii. Sample description,
 - iii. Sample collector,
 - iv. Collection date,
 - v. Analytical date,
 - vi. Analytical results,
 - vii. Analytical flags,The soil sampling results shall be part of the facility's operating record.
 - h. In the event a soil or sediment sample result shows mercury in the sediment at or above 0.64 mg/kg¹, or for soil at or above 3.13 mg/kg² or above a site-specific soil or sediment residual contaminant level³, then VESTS shall notify the Department in accordance with ch. NR 706, WAC and take an immediate action in accordance with ch. NR 708, WAC. The Department will determine if any further remediation is needed and whether actions will be undertaken in accordance with ch. NR 716, WAC and ch. NR 664.0100 and 664.0101, WAC.

¹ MacDonald, D.D., C.G. Ingersoll, and T.A. Berger. 2000a. Development and evaluation of consensus-based sediment quality guidelines for freshwater ecosystems. Arch. Environ. Contam. Toxicol. 39:20-31. Consensus-Based Sediment Quality Guidelines Recommendations for Use & Application Interim Guidance, WT-732 December 2003

² Remediation and Redevelopment guidance available April 16, 2015 at <http://dnr.wi.gov/topic/Brownfields/Professionals.html> to calculate residual contaminant levels (RCLs) in accordance with NR 720, Wis. Adm. Code [PDF exit DNR] (soil cleanup standards). [RCL spreadsheet for use with macro-enabled Excel program \[XLSM\]](#) - Updated January 2015

³ The sediment and soil trigger concentrations may not necessarily be protective of other pathways, such as groundwater, and depending on site specific considerations, a lower (or higher) RCL may be appropriate.

- i. VESTS will notify in writing the Department's designated Hazardous Waste Inspector in SER assigned to VESTS, the Department's designated Hazardous Waste plan review staff person assigned to VESTS and the Department's designated Spills Coordinator when soil or sediment sampling shows that mercury is at or above 0.64 mg/kg in sediment, or at or above 3.13 mg/kg in soil at or above a site-specific residual contaminant level for sediment or soil⁴.
- j. If soil or sediment sampling shows that mercury in sediment is at or above 0.64 mg/kg for sediment or at or above 3.13 mg/kg or above a site-specific soil or sediment residual contaminant level⁵, VESTS shall prepare a plan to address and identify the source(s) of contamination. If the Department's hazardous waste program or Remediation and Redevelopment Program believe VESTS is responsible for soil, sediment or storm water contamination, a mitigation plan addressing source operational modifications shall be provided to the Department within 60 days of receipt of the sampling results.

Information on ISM can be located at <http://www.itrcweb.org/ism-1>.

66. Beginning in 2016 and every year thereafter VESTS, shall sample the storm water collected in the retention basin for mercury.
67. VESTS shall develop a storm water sampling plan that is acceptable to the Department for the annual sampling of the storm water discharged to the wetland for mercury. This sampling plan shall be submitted to the Department within ninety (90) days of the date of this conditional approval. In the development of the sampling plan VESTS shall take the following into consideration:
- a. Collection of storm water samples from the outfall to the wetland. .
 - b. Collection of storm water samples during precipitation events over a period of time using a continuous flow sample device.
 - c. Collection of storm water samples in month(s) that are at or above the average annual precipitation.
 - d. Collection and handling shall be consistent with EPA's Field Sampling Manual SW-846 entitled "*Testing Methods for Evaluating Solid Waste*" and ch. NR 716 WAC.
 - e. Samples shall be analyzed for total mercury using test method SW846/7470A.
 - f. Samples shall be analyzed by a laboratory certified or registered under NR 149 WAC.
 - g. The sampling results shall be part of the facility's operating record.

Information on storm water sampling procedures can be found in sections 3.1.2, 3.3.1.1 and 3.3.1.2 of a March 2002 report entitled "*ETV Verification Protocol Stormwater Source Area Treatment Technologies*". This report was prepared for US EPA Environmental Technology Verification Program.

68. VESTS shall follow any and all conditions of air quality permits and maintain copies of air quality annual compliance certifications and annual air emissions inventory summary reports in the RCRA operating record. Any and all records kept as required by air quality permits conditions shall be made available to hazardous waste inspectors or other Department staff within a reasonable time period upon request.
69. VESTS shall conduct daily mercury internal air mercury monitoring in the areas identified in Section 7.1.2.2 of the FPOR using appropriate equipment that is properly calibrated for the level of mercury detected. VESTS shall follow the manufacturer's instructions on using the monitoring/sampling equipment. The monitoring/sampling results shall be part of the facility's operating record.

Hazardous Waste Air Emissions NR 664 - Subchapter CC

70. VESTS shall visually inspect the potential leak interface areas of each container used to store liquid hazardous waste was a VO concentration greater than 500 ppmw for compliance with ch. NR 664 subch. CC, WAC.

⁴ The sediment and soil trigger concentrations may not necessarily be protective of other pathways, such as groundwater, and depending on site specific considerations, a lower (or higher) RCL may be appropriate.

⁵ The sediment and soil trigger concentrations may not necessarily be protective of other pathways, such as groundwater, and depending on site specific considerations, a lower (or higher) RCL may be appropriate.

71. VESTS shall maintain in the facility operating record a record of all tests used to comply with the air emissions standards, visual inspections and monitoring, organic vapor determinations, and other documentation demonstrating compliance with ch. NR 664 subch. CC, WAC.
72. VESTS shall notify the Department's assigned hazardous waste inspector and hazardous plan review staff if any proposed changes (through air quality construction permits) affect units subject to ch. NR 664 subch AA, BB, CC, or other RCRA rules pertaining to air emissions.

Waste Analysis

73. VESTS shall analyze each waste stream in accordance with the waste analysis procedures set forth in the waste analysis plan listed in section 6 of the FPOR.
74. VESTS shall retain records of all analytical information, including all calibration and maintenance records of on-site laboratory instrumentation for a period of at least three (3) years from the date the waste was analyzed.
75. VESTS shall indicate on the hazardous waste manifest, prepared for sending waste off site, all waste codes applicable to the hazardous waste prior to the commingling, recontainerization or bulking of hazardous waste on-site.
76. VESTS shall follow the sampling collection guidance as outlined in U.S. EPA's SW-846, "Volume II, Field Manual". Sampling methods not covered by SW-846 must be acceptable to the Department.
77. VESTS shall ensure that all samples collected are representative of the waste stream from which the samples are collected.
78. VESTS shall ensure that the person(s) collecting the samples are trained in proper sample collection.
79. VESTS shall only combine wastes that are compatible.
80. VESTS shall indicate on the hazardous waste manifest, prepared for sending waste off site, all waste codes applicable to the hazardous waste prior to the commingling, recontainerization or bulking of hazardous waste on-site.
81. VESTS shall use a laboratory that is certified or registered by the State of Wisconsin.
82. VESTS shall perform a physical and chemical analysis of a waste stream when:
 - a. VESTS is notified that the process or operation generating the waste has changed.
 - b. VESTS has reason to believe that the process or operation generating the waste has changed.
 - c. Results of an inspection indicate that the waste to be collected does not match the waste designated.
83. VESTS shall only combine wastes that are compatible when transferring waste from containers or roll-off boxes into the retort furnace trays.
84. VESTS shall only place wastes in the retort trays that are compatible (e.g., does not cause a fire or explosion) with the on-site treatment system.

Land Disposal Restriction

85. When treating non-wastewaters that are a hazardous waste using a non-specified technology to meet the Land Disposal Restriction (LDR) standards under s. NR 668.40 WAC, VESTS shall collect one grab sample from the center of the waste mass in each treated container.
86. The grab sample collected in Condition 85 of this approval shall be submitted to a laboratory and analyzed to determine if the treated hazardous waste has met the LDR standards under s. NR 668.40 WAC, and, if required, the Universal Treatment Standards under s. NR 668.48 WAC.

87. VESTS shall submit an annual report to the Department by March 1 for the hazardous waste treated the previous calendar year under Condition 85 of this approval. The report data shall be in a tabular format and contain at a minimum the following information:
- a. Generator name and address
 - b. Uniform hazardous waste manifest number
 - c. EPA waste code(s)
 - d. Description of waste
 - e. Date of treatment
 - f. Laboratory results compared against the LDR standards
 - g. Location and date of where the treated waste was disposed of
 - h. A discussion on hazardous wastes that could not be treated to the applicable LDR treatment standards
 - i. A discussion on the quantity and nature of materials that are further recycled off-site (including retorted scrap metal that is shipped off-site for recycling).

Manifests

88. Within forty-five (45) days of receiving a uniform hazardous waste manifest, VESTS shall send one copy of the uniform hazardous waste manifest information to the Department in an electronic format specified by the Department in accordance with s. NR 664.0071(1)(b)4 WAC.
89. Upon notification of a uniform hazardous waste manifest data quality issue by the Department, VESTS, shall within five (5) business days, make the correction(s) and resubmit the uniform hazardous waste manifest information to the Department.
90. VESTS' submittal of the uniform hazardous waste manifest information shall be identical to the information as describe on the uniform hazardous waste manifest.
91. Beginning in 2015, VESTS shall begin quarterly, random, checks of five (5) percent of the paper manifests against VESTS' electronic submittals to the Department for accuracy of the electronic data.
92. VESTS shall submit quarterly reports of the manifest review. The report shall include the uniform manifest tracking number and the results of the review and what actions, if any, were taken to correct inaccurate data. The quarterly report shall be submitted to the Department's assigned hazardous waste inspector and hazardous waste permit writer by the 15th day of April, July, October and January of each year that VESTS maintains a hazardous waste operating license or until VESTS demonstrates there is consistently good agreement between paper manifests and electronic data, then the Department will consider reducing this to an annual requirement covering one (1) percent of the paper manifests.

Corrective Action

93. VESTS shall comply with the requirements of the Remediation & Redevelopment Program's January 20, 2015, letter. A copy of the proposed investigation work plan, timetable, and future Site Investigation Report shall be provided to the Hazardous Waste Program offices in Madison at P.O. Box 7921, Madison, WI 53707 and the SER Plymouth Service Center located at 1155 Pilgrim Rd, Plymouth, WI 53073.
94. The Department retains jurisdiction to require the submittal of additional information and set other conditions, at a later date, through a modification of this conditional plan approval, in accordance with the procedures contained in NR 670, to incorporate the corrective action requirements of s. 291.37, Wis. Stats., and ch. NR 664, subch. F, WAC, for all releases of hazardous constituents from solid waste management units or areas of concern at the VESTS facility. At that time, VESTS may be required to:
- a. Perform interim measures to relieve threats to public health or the environment;
 - b. Further investigate the facility to determine the extent to which the facility poses a substantial hazard to human health or the environment;
 - c. Study and report on alternative corrective measures;
 - d. Implement the corrective measures chosen; and,

e. Provide financial responsibility for the completion of corrective action.

95. VESTS shall submit a Site Investigation Report to the Department no later than the timelines outlined in the Department's Remediation & Redevelopment Program's January 20, 2015 letter to VESTS.
96. Within 90 days after submitting the Site Investigation Report in Condition 95, if necessary, VESTS shall provide a detailed Remedial Action plan to incorporate the corrective action requirements of s. 291.37, Wis. Stats., and ch. NR 664, subch. F, WAC, which includes cost estimates and a schedule to establish full funding within three years or less, owner financial responsibility (OFR) for corrective action(s) selected.

Closure

97. VESTS shall follow the closure plan as submitted in the FPOR when closing all or part of the hazardous waste activities covered by this plan approval.
98. Closure confirmation samples shall be grab samples. Closure confirmation sampling must show that all areas of a unit have been successfully cleaned and that no contamination above the wastewater category standards identified in table 1 of s. NR 668.40 WAC.
99. Field sampling methods shall follow the guidance in EPA's SW-846, "*Volume II, Field Manual*". Field sampling methods not covered by SW-846 must be acceptable to the Department before they are used to close the hazardous waste storage area(s).
100. Sampling methods and equipment, as well as laboratory analytical methods, shall follow the guidance in U.S. EPA's SW-846, "*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition*" (see 40 CFR 260.11).
101. VESTS shall use the lowest possible analytical Method Detection Limit (MDL) for the hazardous constituents associated with listed hazardous wastes.
102. VESTS shall report all concentration data, even if it is estimated, for compounds or elements that have been positively identified in the sample. Some target analytes are present at concentrations that are above the level that can be reliably detected but below the level that they can be reliably quantified. These data are referred to as "qualified" and will be reported as a number, which has been "flagged" by the laboratory. Although less reliable than data which are reported above the Estimated Quantitation Limit (EQL), these qualified data must nevertheless be evaluated carefully by the Department.
103. The closure report shall include a discussion/evaluation of the secondary containment area. This discussion/evaluation of the secondary containment area shall include any observations of visible contamination (i.e., staining caused by waste consisting of light shadows, slight streaks, or minor discolorations), cracks, crevices, and pits in the floor and any defects of the impervious coating used on the floor. Soil sampling will be required if defects are discovered in the secondary containment area that would allow the waste to penetrate the secondary containment area and affect the underlying soils.
104. The closure report shall include a discussion/evaluation of how the cleaning methods and the surfactants chosen are suitable for the contaminants. If detergent washing and water rinsing are selected, the closure report should show that the detergent solution will remove the contaminants of concern. This may be demonstrated with solubility data from product specification sheets or standard chemical tables. The length of time solutions are in contact with the surface and whether or not scrubbing or other physical efforts are used will affect the accuracy of the decontamination demonstration. Other useful considerations might include the temperature of the wash water and the pressure/nozzle that would be used to apply it to clean the surface. The effectiveness of chemical and physical decontamination will also depend on the unit's design, the cleaning solutions, and the constituents to be removed.

105. The closure report shall include a discussion/evaluation on the equipment used to clean the hazardous waste storage area(s), how this equipment was decontaminated and how the residues from the decontamination were handled.
106. The closure report shall include a discussion/evaluation of how waste materials (i.e., rinsate, debris, disposable equipment, etc.) from decontamination were managed and the volumes / quantity of waste materials that were generated by the decontamination efforts. The waste materials will need to be managed as a hazardous waste per s. NR 664.0178, WAC.
107. The closure report shall include a drawing of the hazardous waste storage area(s) that are being closed. The drawing should show, at a minimum, dimensions and other construction details, appurtenant structures and relationship to other significant points or structures on the facility property. All drawings shall provide a specified scale, legend, and north arrows.
108. The closure report shall include a discussion on the types and quantities of hazardous wastes and materials that were stored in hazardous waste storage area(s).
109. The closure report shall include a photo log documenting the decontamination of the hazardous waste storage area(s) and photos showing the 'clean' hazardous waste storage area(s). Each photo should be numbered, dated and include a description of what was photographed.
110. The closure report shall include a discussion/evaluation of the sampling strategy (i.e., sample collection, sample locations, number of samples collected, how the sample was collected and analytical considerations).
111. The closure report shall include waste disposal documentation (e.g. bills of lading, uniform hazardous waste manifest, waste profile information).
112. The closure report shall include a table summarizing the data reported by the lab. The table needs to include concentration data, even if it is estimated, for compounds or elements that have been positively identified in the sample.
113. The closure report shall include a discussion/evaluation of any spills that have occurred in the hazardous waste storage area(s).
114. VESTS shall demonstrate that any residual contamination remaining in the hazardous waste storage area(s) is below the wastewater category standards identified in table 1 of s. NR 668.40 WAC. To achieve clean closure, VESTS will need to meet the wastewater category standards identified in table 1 of s. NR 668.40 WAC for the hazardous wastes that were stored in the hazardous waste storage area(s).

Financial Responsibility

115. VESTS shall maintain up to date closure cost estimates and financial proof mechanism covering closure and liability requirements as defined in ch. NR 664, Subch. H, WAC. Financial proof mechanisms shall also be provided with the corrective actions identified in Condition 96 of this approval.

Dated: _____

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

Edward K. Lynch, P.E., Chief
Hazardous Waste and Mining Section
Bureau of Waste and Materials Management
Wisconsin Department of Natural Resources

David Panofsky, P.E., Hazardous Waste Management Engineer
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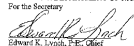
If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes, administrative codes and case law establish time periods and requirements for reviewing Department decisions.

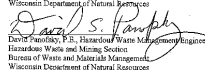
To seek judicial review of the Department's decision, sections 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. You have 30 days after the decision is mailed or otherwise served by the Department to file your petition with the appropriate circuit court and serve the petition on the Department. The petition shall name the Department of Natural Resources as the respondent.

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September 4, 2015

Financial Responsibility
115. VESTS shall maintain up to date closure cost estimates and financial proof mechanism covering closure and liability requirements as defined in ch. NR 664, Subch. H, WAC. Financial proof mechanisms shall also be provided with the corrective actions identified in Condition 96 of this approval.

Dated: SEP 04 2015

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

Edward K. Lynch, P.E., Chief
Hazardous Waste and Mining Section
Bureau of Waste and Materials Management
Wisconsin Department of Natural Resources


David Panofsky, P.E., Hazardous Waste Management Engineer
Hazardous Waste and Mining Section
Bureau of Waste and Materials Management
Wisconsin Department of Natural Resources

NOTICE OF APPEAL RIGHTS
If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes, administrative codes and case law establish time periods and requirements for reviewing Department decisions.
To seek judicial review of the Department's decision, sections 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. You have 30 days after the decision is mailed or otherwise served by the Department to file your petition with the appropriate circuit court and serve the petition on the Department. The petition shall name the Department of Natural Resources as the respondent.