



# California Environmental Protection Agency Department of Toxic Substances Control

## DRAFT STANDARDIZED HAZARDOUS WASTE FACILITY PERMIT, SERIES A

Facility Name: AERC.COM, INC.  
30677 Huntwood Avenue  
Hayward, California 94544

Owner Name: AERC.COM, INC.  
2591 Mitchell Avenue  
Allentown, Pennsylvania 18103

Operator Name: AERC.COM, INC.  
30677 Huntwood Avenue  
Hayward, California 94544

EPA ID Number: CAD 982411993

Effective Date: **DRAFT**

Expiration Date:

Pursuant to California Health and Safety Code sections 25200 and 25201.6, this Standardized Hazardous Waste Facility Permit is hereby issued to AERC.COM, INC.

The Issuance of this Permit is subject to the terms and conditions set forth in Attachment A. This Permit consists of 29 pages, including this cover page and Attachment A.

\_\_\_\_\_  
Peter Bailey, P.G., Team Leader  
Permit Renewal Team  
Department of Toxic Substances Control

\_\_\_\_\_  
Date

**AERC.COM, INC.  
30677 HUNTWOOD AVENUE  
HAYWARD, CALIFORNIA 94544**

**DRAFT STANDARDIZED HAZARDOUS WASTE FACILITY PERMIT  
ATTACHMENT A**

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## **PART I. DEFINITIONS**

All terms used in this Permit shall have the same meaning as those terms have in the California Health and Safety Code, division 20, chapter 6.5 and California Code of Regulations, title 22, division 4.5, unless expressly provided otherwise by this Permit.

1. **“DTSC”** as used in this Permit means the California Department of Toxic Substances Control.
2. **“Facility”** as used in this Permit means all contiguous land and structures, other appurtenances, and improvements on the land used for the treatment, transfer, storage resource recovery, disposal or recycling of hazardous waste. A hazardous waste facility may consist of one or more treatment, transfer, storage, resource recovery, disposal or recycling operational units or combinations of these units.

For the purpose of implementing corrective action under California Code of Regulations, title 22, division 4.5, a hazardous waste facility includes all contiguous property under the control of the owner or operator required to implement corrective action.

3. **“Permittee”** as used in this Permit means the Owner and Operator.
4. **“RCRA”** as used in this Permit means the Resource Conservation and Recovery Act (42 U.S.C. §6901 et seq.).
5. **“RCRA hazardous waste”** as used in this Permit is as defined in Health and Safety Code section 25120.2.
6. **“Non-RCRA hazardous waste”** as used in this Permit is as defined in Health and Safety Code section 25117.9.
7. **“Destination facility”** as used in this Permit is as defined in California Code of Regulations, title 22, section 66273.9
8. **“Universal waste handler”** as used in this Permit is as defined in California Code of Regulations, title 22, section 66273.9

## **PART II. DESCRIPTION OF THE FACILITY AND OWNERSHIP**

1. Owner of Facility

AERC.COM, INC.  
2591 Mitchell Avenue  
Allentown, Pennsylvania 18103

2. Owner of Real Property

Northern California Industrial Portfolio, Inc.  
c/o RREEF Management  
3555 Arden Road  
Hayward, California 94545

3. Operator of Facility

AERC.COM, INC.  
30677 Huntwood Avenue  
Hayward, California 94544

4. Location

The AERC.COM, INC.'s facility (Facility) is located at 30677 Huntwood Avenue, Hayward, California 94544, in Alameda County, at latitude 37° 36' 34" North and longitude 122° 5' 18" West. The Facility site plan and plot plan are included in this Permit as Attachments 1 and 2, respectively.

5. Description of Facility Operations

AERC.COM, INC. (AERC) operates a destination facility to reclaim mercury from spent fluorescent and high intensity discharge (HID) lamps. AERC receives, collects, and transports spent fluorescent lamps on a standard bill of lading to the Facility. The spent lamps are unloaded manually and by forklift and placed in the lamp storage areas in the Facility.

In the spent fluorescent lamp treatment process, AERC crushes the spent lamps and separates the phosphor powder (containing mercury) from the lamps' non-hazardous components (i.e., the outer glass and metal end caps) and reclaims and recycles mercury at offsite permitted treatment, storage and disposal facilities (TSDFs). In the spent HID lamp treatment process, AERC separates the inner HID capsule containing mercury from the outer glass and metal components and reclaims and recycles mercury at offsite permitted TSDFs. When the outer glass from the disassembled lamps (fluorescent and HID) exceeds regulatory thresholds for mercury concentrations, the waste is managed

as hazardous waste and sent offsite to a permitted TSDF. Any non-hazardous glass and metal components are sent offsite to a recycler.

In addition to being a destination facility for lighting wastes, AERC is a universal waste handler which receives and stores waste streams K, L, M, N, S, and U. AERC also receives and stores lead-acid batteries (waste stream K-1) under California Code of Regulations, title 22, section 66266.81. Waste streams K, K-1, L, M, N, S, and U are stored in Aisles N1 to N3 (which are not subject to this Permit) and Storage Area #1.

The waste streams received, stored or treated at AERC and the storage capacities are described in Table 1 and Table 2.

#### 6. Facility History

Mercury Technology Inc (MTI), owned by AERC, started operating this Facility in 1989. MTI received Interim Status from DTSC on December 31, 1993. DTSC issued a Standardized Hazardous Waste Facility Permit, Series A, to MTI on November 25, 1997, which became effective on December 29, 1997 and expired on December 29, 2007. In February 2001, AERC changed MTI's name to AERC.COM, INC.

On December 28, 2006, AERC submitted an application to renew its Standardized Permit. DTSC determined the application to be administratively complete on January 16, 2007. In accordance with California Code of Regulations, title 22, section 66270.51, AERC is allowed to continue operating under the terms of the expired permit until DTSC makes a final permit determination on AERC's renewal application.

#### 7. Facility Size and Type for Fee Purposes

This Permit is categorized as a "Series A" Standardized Permit pursuant to Health and Safety Code section 25201.6 and for purposes of Health and Safety Code sections 25205.2 and 25205.19.

#### 8. Closure Cost Estimate

The Closure Cost Estimate (in 2009 Dollars), as approved by DTSC on August 24, 2009, is \$79,667.08.

### **PART III. GENERAL CONDITIONS**

#### **1. PERMIT APPLICATION DOCUMENTS**

The Standardized Permit Application dated August 20, 2009 and submitted to DTSC by the Permittee is hereinafter referred to as the "Standardized Permit Application" and is hereby made a part of this Permit by reference.

#### **2. EFFECT OF PERMIT**

- (a) The Permittee shall comply with the terms and conditions of this Permit and the provisions of the Health and Safety Code and California Code of Regulations (Cal. Code Regs.), title 22, division 4.5. The issuance of this Permit by DTSC does not release the Permittee from any liability or duty imposed by federal or state statutes or regulations or local ordinances, except the obligation to obtain this Permit. The Permittee shall obtain the permits required by other governmental agencies, including but not limited to, those required by the applicable land use planning, zoning, hazardous waste, air quality, water quality, and solid waste management laws for the construction and/or operation of the Facility.
- (b) The Permittee is permitted to treat and store hazardous wastes in accordance with the terms and conditions of this Permit. Any management of hazardous wastes not specifically authorized in this Permit is strictly prohibited.
- (c) Compliance with the terms and conditions of this Permit does not constitute a defense to any action brought under any other law governing protection of public health or the environment, including, but not limited to, one brought for any imminent and substantial endangerment to human health or the environment.
- (d) DTSC's issuance of this Permit does not prevent DTSC from adopting or amending regulations that impose additional or more stringent requirements than those in existence at the time this Permit is issued and does not prevent the enforcement of these requirements against the Permittee.
- (e) Failure to comply with any term or condition set forth in the Permit in the time or manner specified herein will subject the Permittee to possible enforcement action including but not limited to penalties pursuant to Health and Safety Code section 25187.
- (f) Failure to submit any information required in connection with the Permit, or falsification and/or misrepresentation of any submitted information, is grounds for revocation of this Permit (Cal. Code Regs., tit. 22, §66270.43).

- (g) In case of conflicts between the Operation Plan and the Permit, the Permit conditions take precedence.
- (h) This Permit includes and incorporates by reference any conditions of waste discharge requirements issued to the Facility by the State Water Resources Control Board or any of the California Regional Water Quality Control Boards and any conditions imposed pursuant to section 13227 of the Water Code.

3. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

DTSC has prepared a Notice of Exemption in accordance with the requirements of Public Resources Code section 21000 et seq. and the CEQA Guidelines, section 15061(b)(3), et seq. of California Code of Regulations, title 14.

4. ACCESS

- (a) DTSC, its contractors, employees, agents, and/or any United States Environmental Protection Agency representatives are authorized to enter and freely move about the Facility for the purposes of interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts relating to the Facility; reviewing progress of the Permittee in carrying out the terms of Part VI of the Permit; conducting such testing, sampling, or monitoring as DTSC deems necessary; using a camera, sound recording, or other documentary-type equipment; verifying the reports and data submitted to DTSC by the Permittee; or confirming any other aspect of compliance with this Permit, Health and Safety Code, division 20, chapter 6.5, and California Code of Regulations, title 22, division 4.5. The Permittee shall provide DTSC and its representatives access at all reasonable times to the Facility and any other property to which access is required for implementation of any provision of this Permit, Health and Safety Code, division 20, chapter 6.5, and California Code of Regulations, title 22, division 4.5, and shall allow such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to the entire Permit or undertake any other activity necessary to determine compliance with applicable requirements.
- (b) Nothing in this Permit shall limit or otherwise affect DTSC's right to access and entry pursuant to any applicable State or federal laws and regulations.

#### **PART IV. PERMITTED UNITS AND ACTIVITIES**

This Permit authorizes operation only of the facility units and activities listed below. The Permittee shall not treat, store or otherwise manage hazardous waste in any unit other than those specified in this Part IV. Any modifications to a unit or activity authorized by this Permit require the written approval of DTSC in accordance with the permit modification procedures set forth in California Code of Regulations, title 22, division 4.5.

##### **UNIT #1:**

LSS1 FLUORESCENT LAMP PROCESSING MACHINE

##### **LOCATION:**

The LSS1 Fluorescent Lamp Processing Machine is located near the center, off-set four to five feet from the northern wall of the Facility (See Attachment 2).

##### **ACTIVITY TYPE:**

Treatment of hazardous waste

##### **ACTIVITY DESCRIPTION:**

A pictorial process flow diagram for the LSSI fluorescent lamp de-manufacturing system is shown in Attachment 3. It has a nominal capacity to process 3,500 4-foot fluorescent lamp tubes (T-12) or 5,250 4-foot tubes (T-8) Lamps per hour. The de-manufacturing process crushes the outer glass of the fluorescent lamps and separates the glass, the metal end caps and phosphor powder containing mercury, and is equipped with a vacuum system. The vacuum system is connected to a High-Efficiency Particulate Air (HEPA) filtration system and an activated carbon canister, which absorbs any mercury vapor released by the process and cleans the process air before it is vented into the atmosphere. All treatment operations are performed in an enclosed building.

The phosphor powder is sent to an off-site treatment facility for further processing. At the off-site treatment facility, the mercury is purified by retorting and then sent to an off-site recycling facility. The non-hazardous glass and metal components are sent off-site to a recycler.

##### **PHYSICAL DESCRIPTION:**

The LSS1 Lamp Processing Machine consists of an enclosed disassembly machine which crushes, separates, and recovers the components of fluorescent lamps using an integrated system of specialized equipment, conveyors and vacuum devices.

The LSS1 may be fed intact lamps via a feed table (for tubes) which uses a conveyor belt to move the lamps systematically to the crushing sections of the machine. A separate feed tube is used to feed individual lamps that are coated with plastic. This feed tube and shear crusher operate prior to the crushing and sorting activities. The

third and fourth options for feeding waste lamps involve either opening the LSS1 housing above the second conveyor belt and manually shoveling crushed lamps from a 55-gallon drum into the LSS1, or employing a Crushed Lamp Drum Feed Attachment described below:

Drums of previously crushed lamps, or accidentally broken lamps may be fed into the LSS1 by opening the housing over the second conveyor belt, just down-stream of the intact lamp conveyor feed table.

#### CRUSHED LAMP DRUM FEED ATTACHMENT

The Crushed Lamp Drum Feed Attachment to the LSS1 Lamp Processing Machine adds operational flexibility by allowing the LSS1 to process broken lamps. It does not increase the machine's capacity. The feed attachment fitted to the LSS1 uses a cone clamped to a 55-gallon drum to facilitate the emptying of drums of crushed lamps without undue fugitive emission of mercury or particulate matter.

#### MAXIMUM CAPACITY:

The maximum permitted treatment capacity is 63,000 pounds of lamps per day.

#### WASTE TYPES:

Waste Stream A: Spent fluorescent lamps from off-site facilities.

Waste Stream B: Mercury-containing phosphor powder.

Waste Stream C: Glass components from disassembled and broken fluorescent lamps.

Waste Stream D: Metallic components from disassembled and broken fluorescent lamps.

Waste Stream I: Plant debris (Wipe cloths, mop heads, used gloves etc.)

Waste Stream R: Crushed or broken fluorescent lamps from off-site facilities.

#### HAZARDOUS WASTE CODES:

U.S. EPA Hazardous Waste Codes: D009

California Hazardous Waste Codes: 181, 612

#### UNIT-SPECIFIC SPECIAL CONDITIONS:

1. The Permittee shall take, at a minimum, one grab sample per week from the fluorescent lamp crushed glass and metal end cap waste and test a composite monthly sample at a California State certified analytical laboratory to verify that the crushed glass and end caps do not exceed hazardous waste criteria for mercury. The Permittee shall retain these test results at the Facility until closure of the Facility. When test analysis shows that the samples tested exceed hazardous waste criteria for mercury, the Permittee shall cease operation of the LSS1 Lamp Processing Machine and implement engineering and/or administrative controls until the problem is corrected. The Permittee shall also notify DTSC within twenty four hours

whenever samples tested exceed hazardous criteria for mercury and provide a copy of this test analysis data to DTSC within seven days of receiving the results.

2. The Permittee may only feed waste into the LSS1 through the opening in the housing over the second conveyor belt or by using a Crushed Lamp Drum Feed Attachment when other feed mechanisms are not in use.
3. The Permittee may use a Crushed Lamp Drum Feed Attachment as long as it does not differ in function or form from the Crushed Lamp Drum Feed Attachment described in the Standardized Permit Application.

UNIT #2:

HIGH INTENSITY DISCHARGE (HID) LAMP DE-MANUFACTURING PROCESS UNIT

LOCATION:

This Unit is near the center of the Facility along the northern wall, east of the LSS1 Lamp Processing Machine (See Attachment 2).

ACTIVITY TYPE:

Treatment of hazardous waste

ACTIVITY DESCRIPTION:

A pictorial process flow diagram for the HID lamp de-manufacturing system is shown in Attachment 4.

In the disassembly process, the metal base is detached from the outer glass and the inner HID capsule. The outer glass bulb is broken to allow the removal of the inner capsule. The disassembly process uses a filtration system which prevents any mercury vapor from escaping into the environment (due to breakage of the inner HID capsules). When the outer glass exceeds the regulatory threshold for mercury concentrations, the waste is managed as hazardous waste and sent to an offsite TSDF. Non-hazardous glass and metal components are sent to an offsite recycling facility. The inner HID capsules which contain metallic mercury are shipped offsite for retorting.

PHYSICAL DESCRIPTION:

The HID lamp de-manufacturing process consists of an HID lamp disassembly unit incorporating a filtration system which operates under negative pressure. This process area encompasses 80 square feet.

MAXIMUM CAPACITY:

The maximum permitted treatment capacity is 5,760 pounds of HID lamps per day.

WASTE TYPES:

Waste Stream E: Spent High Intensity Discharge (HID) lamps from offsite facilities.  
Waste Stream F: Intact or broken inner HID capsules from disassembled HID lamps.  
Waste Stream G: Outer glass from disassembled or broken HID lamps.  
Waste Stream H: Metal components from HID lamps.

HAZARDOUS WASTE CODES:

U.S. EPA Hazardous Waste Codes: D009  
California Waste Codes: 181, 725

UNIT-SPECIFIC SPECIAL CONDITIONS:

1. The Permittee shall take, at a minimum, one grab sample per month from the metal components and outer glass resulting from the HID lamp de-manufacturing process and have the samples tested at a California State certified analytical laboratory to verify that the metal components and outer glass do not exceed hazardous waste criteria for mercury. The Permittee shall retain these test results at the Facility until closure of the Facility. When test analysis shows that the samples tested exceed hazardous waste criteria for mercury, the Permittee shall cease operation of the HID lamp de-manufacturing process and implement engineering and/or administrative controls until the problem is corrected. The Permittee shall also notify DTSC within 24 hours whenever samples tested exceed hazardous criteria for mercury, and provide a copy of the analysis data to DTSC within seven days of obtaining the results.

UNIT #3:

STORAGE AREA #1

LOCATION:

Storage Area #1 is located on the south side of the Facility. Attachment 2, Facility Storage Plot Plan, identifies Storage Area #1 as Aisles S1 to S5.

ACTIVITY TYPE:

Storage of hazardous waste in containers

ACTIVITY DESCRIPTION:

Phosphor powder containing mercury, intact mercury-containing inner HID capsules, intact PCB ballasts, plant debris, broken fluorescent lamps, and spent carbon from the LSS1 filtration system are stored in separate DOT-compliant drums on pallets as described below. Leaking PCB ballasts and broken HID inner capsules are stored in DOT-compliant 55-gallon drums on secondary containment pallets.

PHYSICAL DESCRIPTION:

Storage Area #1 is entirely within the enclosed building (See Attachment 2). Each aisle measures approximately 4 feet by 16 feet, and accommodates four pallets end to end.

MAXIMUM CAPACITY:

1. Phosphor powder containing mercury: Maximum of 10,000 pounds at any one time.
2. Inner HID capsules: Maximum of sixteen (16) 55-gallon drums containing inner HID capsules (intact or broken) at any one time.
3. Lighting ballasts: Maximum of twenty-eight (28) 55-gallon drums containing lighting ballasts with PCBs at any one time.
4. Plant debris and spent carbon: Maximum of thirty-two (32) 55-gallon drums at any one time.
5. Broken fluorescent lamps: Each full drum of broken fluorescent lamps is about 760 T-8 fluorescent lamps. The volume of broken fluorescent lamps in storage is counted as part of total fluorescent lamps.

WASTE TYPES:

Waste Stream B: Mercury-containing phosphor powder.

Waste Stream F: Intact or broken inner HID capsules from disassembled HID lamps.

Waste Stream I: Plant debris from plant processing and cleaning activities.

Waste Stream J: Non-leaking PCB ballasts from offsite facilities.

Waste Stream P: Spent carbon filter media from processing plant equipment filters.

Waste Stream R: Crushed or broken fluorescent lamps from off-site generators

HAZARDOUS WASTE CODES:

U.S. EPA Hazardous Waste Codes: D009

California Waste Code: 181, 261, 612, 725

UNIT-SPECIFIC SPECIAL CONDITIONS:

1. The Permittee shall not store lighting ballasts containing PCBs (Waste Stream J) for longer than 30 days.
2. The Permittee shall not store phosphor powder containing mercury (Waste Stream B), HID inner capsules (intact or broken) (Waste Stream F), broken fluorescent lamps (Waste Stream R), plant debris and spent carbon from filtration system (Waste Stream I and Waste Stream P) for longer than 90 days.
3. The Permittee shall store leaking PCB ballasts and broken inner HID capsules in DOT-compliant 55-gallon drums on secondary containment pallets as described in the Standardized Permit Application and shall not stack these drums on top of or beneath any other drums .
4. Except as otherwise provided in Condition No. 3 above, the Permittee shall not stack drums of hazardous waste higher than the equivalent of two 55-gallon drums on pallets.
5. The Permittee shall place all drums of waste on pallets.
6. The maximum number of pallets in Storage Area #1 shall not exceed 40, including pallets holding wastes or materials that are not subject to this Permit.
7. The Permittee shall maintain a minimum of 30 inches space between two aisles, e.g. Aisle S1 and S2, S2 and S3, etc. as shown in Attachment 2.

UNIT #4:

STORAGE AREA #2

LOCATION:

Storage Area #2 is located in the center of the Facility and extends along the southern wall to the west end of the building. The Facility Storage Plot Plan (See Attachment 2) identifies Storage Area #2 as Aisles S6 to S19.

ACTIVITY TYPE:

Storage of hazardous waste in containers

ACTIVITY DESCRIPTION:

Spent fluorescent and HID lamps packaged in cardboard, fiber drums, and wooden boxes from offsite facilities are unloaded and placed on pallets in designated storage areas. The typical height of a pallet of lamps in this area is between four and five feet high. One pallet may contain approximately 1,000 lamps. Spills from breakage during transportation are cleaned up and processed through the LSS1 de-manufacturing system (Unit #1).

PHYSICAL DESCRIPTION:

Storage Area #2 is entirely within the enclosed building. Aisles S6 and S7 measure approximately 4 feet by 16 feet, while aisles S8-S19 measure approximately 4 feet by 24 feet.

MAXIMUM CAPACITY:

The maximum permitted capacity for both fluorescent and HID lamps is 78,000. The maximum permitted quantity of HID lamps is 12,000. The maximum permitted quantity of fluorescent lamps therefore will vary between 66,000 and 78,000 depending on the quantity of HID lamps in storage.

WASTE TYPES:

Waste Stream A: Spent fluorescent lamps from offsite facilities.

Waste Stream E: Spent High Intensity Discharge (HID) lamps from offsite facilities.

HAZARDOUS WASTE CODES:

U.S. EPA Hazardous Waste Codes: D009

California Hazardous Waste Codes: 181, 612

UNIT-SPECIFIC SPECIAL CONDITIONS:

1. The Permittee shall not store spent fluorescent (Waste Stream A) and HID lamps (Waste Stream E) for longer than 90 days before they are treated in Unit #1 or Unit #2.
2. The Permittee shall not stack cardboard and wooden boxes or fiber drums higher than nine feet and shall only double stack the containers when the lower container is strong enough to support the upper container.
3. The maximum number of pallets in Storage Area #2 shall not exceed 80, including pallets holding wastes or materials that are not subject to this Permit.
4. The Permittee shall maintain a minimum of 30 inches aisle space between double rows of pallets, e.g. S7 and S8, S9 and S10, etc. as shown in Attachment 2.
5. The Permittee shall store lamps in closed, structurally sound containers that are free of tears, leakage, spillage or damage.
6. In the event of broken lamps or releases from containers, the Permittee shall immediately clean up these materials and place them in containers in Storage Area #1 (Unit #3).

## **PART V. SPECIAL CONDITIONS**

1. The Permittee is prohibited from conducting any hazardous waste transfer, storage, treatment or other management activity unless it is specifically described in this Permit or otherwise authorized by DTSC.
2. The Permittee shall keep all containers closed except when adding or removing waste.
3. In the event any cracks, gaps, or tears are detected in any hazardous waste management unit, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permittee shall notify DTSC within 24 hours whenever containment problems are found. Within seven days of discovery of the problem, the Permittee shall notify DTSC in writing of corrective measures that have been taken.
4. In the event of any cracks, leaking, or visible damage to a secondary containment pallet, the Permittee shall immediately remove it from service.
5. Containers holding hazardous wastes shall be stored only in the authorized areas designated in Part IV of this Permit. Any non-hazardous waste, exempt transfer facility waste, lead-acid battery waste or universal waste that is stored in a designated hazardous waste storage area as provided by this Permit shall be subject to the conditions of this Permit, including volume calculations, compatibility and inspections.
6. For the purpose of calculating the permitted maximum capacity limitations for storage and for secondary containment, all containers in the authorized units shall be presumed to be full, and all hazardous waste that is stored or located in an authorized unit shall be included in the calculation for that unit, including any hazardous waste that is covered by the transfer facility exemption under California Code of Regulations, title 22, section 66263.18. This presumption may be refuted by the Permittee with respect to drums containing broken/crushed fluorescent lamps.

The presumption that drums containing broken fluorescent lamps are full may be refuted by the Permittee based on the net weight of the contents of each such drum. The Permittee may determine the number of broken lamps by weighing the drum, subtracting the tare weight (weight of the empty drum), and dividing the net weight of drum contents by 0.6 pound (which represents the assumed average weight per lamp). This figure shall be used to determine compliance with the storage capacity limitations specified in this Permit.

7. The Permittee shall measure the concentration of mercury vapor in the air to which workers are exposed at least every two hours each work day using a portable mercury vapor analyzer. These measurements shall be taken at twelve locations as described in the Daily Air Monitoring Log in the approved

Standardized Permit Application. All measurements taken shall be recorded specifying the date, time and location of measurements.

- (a) The California Permissible Exposure Limits (PEL) for mercury vapor is an Eight-Hour Time-Weighted Average Concentration (TWA) of 0.025 mg/M<sup>3</sup> in accordance with California Code of Regulations, title 8, section 5155.
  - (b) All affected personnel shall wear personal protective equipment (PPE) when the mercury vapor levels are above 0.025 mg/M<sup>3</sup>
8. When generators choose to ship universal waste (i.e. batteries, sodium lamps, mercury containing lamps, electronic devices and Cathode Ray Tubes (CRTs)) under a uniform hazardous waste manifest, the Permittee may accept the manifested universal waste if it is accompanied by a generator's certification stating that the waste is hazardous only due to normal battery, lamp, or CRT contents, and not due to the presence of other hazardous waste or waste constituents. The generator's certification shall be prepared in accordance with California Code of Regulations, title 22, section 66270.11(d).
9. The Permittee shall manage the outer glass and metal from both the fluorescent and the HID lamp de-manufacturing processes that exceed regulatory thresholds for mercury concentrations as hazardous waste in accordance with the conditions of this Permit.
10. Only employees of the Permittee who are fully trained in the Facility's operations and procedures are allowed to handle the treatment and storage operations at the Facility.

## **PART VI. CORRECTIVE ACTION**

1. In the event the Permittee identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous constituents, or discovers new Solid Waste Management Units (SWMUs) not previously identified, the Permittee shall notify DTSC orally within 24 hours of discovery and notify DTSC in writing within 10 days of such discovery summarizing the findings including the immediacy and magnitude of any potential threat to human health and/or the environment.
2. DTSC may require the Permittee to investigate, mitigate and/or take other applicable action to address any immediate or potential threats to human health and/or the environment and newly identified SWMUs or releases of hazardous waste and/or hazardous constituents. If and when corrective action is required at the Facility, the Permittee shall conduct corrective action under either a Corrective Action Consent Agreement or an Enforcement Order for Corrective Action issued by DTSC pursuant to Health and Safety Code sections 25187 and 25200.10.
3. To the extent that work being performed pursuant to Part VI of the Permit must be done on property not owned or controlled by the Permittee, the Permittee shall use its best efforts to obtain access agreements necessary to complete work required by this Part of the Permit from the present owner(s) of such property within 30 days of approval of any workplan for which access is required. "Best efforts" as used in this paragraph shall include, at a minimum, a certified letter from the Permittee to the present owner(s) of such property requesting access agreement(s) to allow the Permittee and DTSC and its authorized representatives access to such property and the payment of reasonable sums of money in consideration of granting access. The Permittee shall provide DTSC with a copy of any access agreement(s). In the event that agreements for the access are not obtained within 30 days of approval of any workplan for which access is required, or of the date that the need for access becomes known to the Permittee, the Permittee shall notify DTSC in writing within 14 days thereafter regarding both efforts undertaken to obtain access and its failure to obtain such agreements. In the event DTSC obtains access, the Permittee shall undertake approved work on such property. If there is any conflict between this permit condition on access and the access requirements in any agreement entered into between DTSC and the Permittee, this permit condition on access shall govern.
4. Nothing in Part VI of the Permit shall be construed to limit or otherwise affect the Permittee's liability and obligation to perform corrective action including corrective action beyond the Facility boundary, notwithstanding the lack of access. DTSC may determine that additional on-site measures must be taken to address releases beyond the Facility boundary if access to off-site areas cannot be obtained.

**Table 1: WASTE STREAM DESCRIPTIONS**

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Waste Stream Letter	Common Name of Hazardous Waste	U.S. EPA Waste Codes	California Waste Codes	Maximum Storage Time at Facility	Description of Waste	Process Generating Waste
A <sup>1</sup>	Mercury Containing Lighting Devices - Fluorescent Lamps	N/A - Note: Some generators choose to ship these wastes as characteristic hazardous wastes (D009)	181 612	90 days	Spent Fluorescent Lighting Devices	Incoming spent lamps from off-site generators
B	Mercury containing Phosphor Powder	D009	181	90 days	Phosphor Powder from Fluorescent and Hg containing Lighting Devices	Recycling of Spent Lamps
C	Recovered glass from Fluorescent lamp recycling process	N/A	N/A		Glass Components from Lamps - non-hazardous after processing	Lamp Recycling System
D	Recovered metallic end caps and pins and wires from fluorescent lamp recycling process	N/A	N/A		Metal Components from Lamps - non-hazardous after processing	Lamp Recycling System
E <sup>1</sup>	Mercury-containing HID lamps	N/A - Note: Some generators choose to ship these wastes as characteristic hazardous wastes (D009)	181	90 days	Mercury-containing HID lamps, including mercury vapor, metal halide, and high pressure sodium lamps	Incoming spent HID lamps from off-site generators
F	Internal Capsules containing Metallic Mercury from HID Lamps	D009	181 725	90 days	Intact or broken, internal capsules containing metallic mercury from the disassembly of HID lamps.	Disassembly of HID lamps
G	Recovered outer glass from HID lamps	N/A	N/A		Recovered outer glass from HID lamp disassembly. Non-hazardous after processing.	Disassembly of HID lamps

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Waste Stream Letter	Common Name of Hazardous Waste	U.S. EPA Waste Codes	California Waste Codes	Maximum Storage Time at Facility	Description of Waste	Process Generating Waste
H	Metal base, mounting stem, and spacer	N/A	N/A		Metal base, mounting stem, and spacer from HID lamp disassembly. Non-hazardous after processing.	Disassembly of HID lamps
I	Plant debris	D009	352	90 days	Plant scraps, debris, tyvek uniforms, etc.	Plant processing and cleaning activities
J	Non-leaking Fluorescent Lighting Ballasts containing PCBs	N/A	261	30 days	Lighting ballasts containing small capacitors with PCBs.	Incoming spent lighting ballasts from off-site generators from lighting maintenance and energy efficiency upgrades
K <sup>1,2</sup>	Universal Waste Batteries	N/A - Note: Some generators choose to ship these wastes as characteristic hazardous wastes	N/A		Small consumer and other batteries including alkaline, nickel-cadmium, nickel-metal hydride, carbon zinc, mercury oxide, and other types.	Incoming spent batteries from off-site generators
K-1	Lead Acid Battery	N/A - Note: Some generators choose to ship these wastes as characteristic hazardous wastes (D002, D008)				Incoming spent batteries from off-site generators
L <sup>1,2</sup>	Universal Waste –CRTs and CRT glass	N/A - Note: Some generators choose to ship these wastes as characteristic hazardous wastes	N/A			Incoming CRTs and CRT glass from off-site generators

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Waste Stream Letter	Common Name of Hazardous Waste	U.S. EPA Waste Codes	California Waste Codes	Maximum Storage Time at Facility	Description of Waste	Process Generating Waste
M <sup>2</sup>	Universal Waste-Electronic Devices	N/A	N/A		Computer monitors, televisions, CPU's, printers, fax machines, telephones, mice, other electronic devices and peripherals.	Incoming electronic devices from off-site generators
N <sup>1,2</sup>	Mercury Containing Devices	Note: Mercury-containing devices such as thermostats, thermometers, barometers, regulators, are classified as Universal Waste	181 612		Mercury-containing devices such as thermometers, barometers, regulators, thermostats, etc.	Incoming mercury containing devices from off-site generators
O	Incandescent type Lamps Not Containing Mercury	N/A - Note: Some generators choose to ship these wastes as characteristic hazardous wastes	N/A		Lamps such as, incandescent lamps, etc. that do not contain mercury – non-hazardous waste.	Incoming lamps from off-site generators
P	Carbon from Filtration Equipment	D009	181	90 days Managed as Generator waste	Carbon filter media generated from the replacement of processing equipment filters.	Change out of carbon filter media from processing equipment filters.
Q	Non-leaking Fluorescent Lighting Ballasts without PCBs	N/A	N/A		Lighting ballasts containing small capacitors without PCBs – non-hazardous waste.	Incoming spent lighting ballasts from off-site generators from lighting maintenance and energy efficiency upgrades
R	Crushed / Broken Fluorescent Lamps containing Mercury	D009 or N/A	181 612	90 days	Crushed and broken fluorescent lamps containing mercury	Incoming lamps from off-site generators

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Waste Stream Letter	Common Name of Hazardous Waste	U.S. EPA Waste Codes	California Waste Codes	Maximum Storage Time at Facility	Description of Waste	Process Generating Waste
S <sup>1,2</sup>	Low Pressure Sodium Lamps	N/A	N/A		Low pressure sodium lamps that do not contain mercury	Incoming lamps from off-site generators
U <sup>1,2</sup>	Dental Amalgam	N/A	N/A		Dental amalgam as a universal waste	Incoming from off site generators

- 1: Subject to Universal Waste rule; some generators choose to send waste as a hazardous waste**  
**2: AERC is a universal waste handler for these waste streams.**

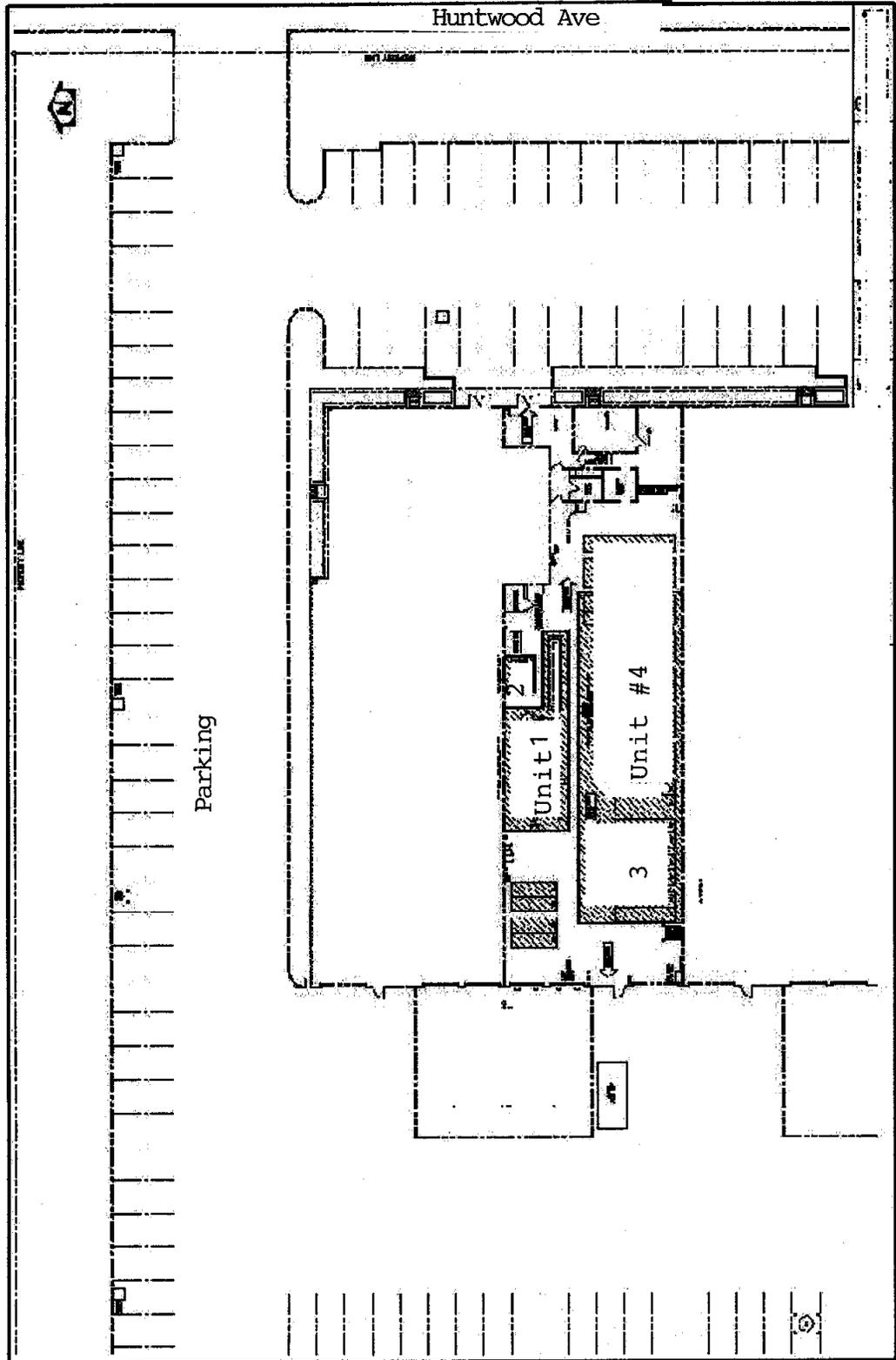
**Table 2: AERC Storage Aisle Designation and Capacities**

Waste Storage Category	Storage Areas	Maximum Volumes			
		Pounds	Drum Equivalent	Count	Pallet Spaces
MERCURY CONTAINING LAMPS (FLUORESCENT)	S6 TO S19			78,000*	
PHOSPHOR POWDER	S1 TO S5	10,000	16		4
HID LAMPS	S6 TO S19			12,000*	
HID INNER CAPSULES (intact or broken)	S1 TO S5	2,240	16		4
PLANT DEBRIS	S1 TO S5		32		8
BALLASTS WITH PCBS	S1 TO S5	21,000	28		7
UNIVERSAL WASTE BATTERIES	S1 TO S5				
CRTS AND MONITORS	N1 TO N3	20,000			20
ELECTRONIC SCRAP	N1 TO N3	20,000			20
DENTAL AMALGAM	N1 TO N3,	500	1		0.25
MERCURY DEVICES	S1 TO S5	8,000	16		4
NON-MERCURY LAMPS	N1 TO N3				
CARBON FROM FILTRATION SYSTEM	S1 TO S5				AS PLANT DEBRIS
BROKEN FLUORESCENT LAMPS	S1 TO S5				AS FLUORESCENT LAMP
SODIUM LAMPS, LEAD ACID BATTERIES	N1 TO N3				
RECOVERED METALLIC COMPONENTS, STEM, AND SPACER; GLASS	N1 TO N3				

Note: Secondary containment pallet dimensions approximately 53" x 53" x 11 3/4".

\* Combined storage for HID and fluorescent lamps is dynamic and the total number cannot exceed 78,000 lamps at any time. The total number of HID lamps cannot exceed 12,000 lamps.

**Attachment 1: AERC FACILITY PLOT PLAN**







**Attachment 4: PROCESS FLOW DIAGRAM FOR SPENT HID LAMPS**

