Department of Toxic Substances Control

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Secretary for
Environmental Protection

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December 9, 2019

Mr. Mark Kasper
Chief Operations Officer
Clean Earth
2591 Mitchell Avenue
Allentown, PA 18103
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FIRST NOTICE OF DEFICIENCY FOR STANDARDIZED PERMIT APPLICATION FOR AERC RECYCLING SOLUTIONS HAZARDOUS WASTE FACILITY, 30677 HUNTWOOD AVENUE, HAYWARD, CALIFORNIA; EPA ID NO. CAD982411993.

Dear Mr. Kasper:

The Department of Toxic Substances Control (DTSC) has completed its technical review of the Standardized Permit Application (Application) dated July 30, 2019 for AERC Recycling Solutions located at 30677 Huntwood Avenue in Hayward, California. The Application has been reviewed for compliance with the applicable requirements of California Code of Regulations, title 22, division 4.5 and the Health and Safety Code, Division 20. DTSC has determined that the Application is deficient. The enclosed comments comprise the Notice of Deficiency (NOD) issued for the Application. A meeting to discuss the NOD items is scheduled for December 18, 2019.

The following must be submitted by February 10, 2020

1) Two hardcopies and one electronic PDF copy (CD or flash drive) of the complete, clean version of the revised permit application. The revised permit application must be a complete application with all sections, figures, tables, appendices, calculations, attachments and all information required by California Code of Regulations, title 22, division 4.5 and Health and Safety Code, division 20. In other word, the revised permit application must be a stand-alone document with all deficiencies corrected.

2) Once hardcopy redlined/strikeout version of the application showing the changes that have been made as requested in the NOD.

3) One hardcopy of the written response to each of the deficiencies identified in the NOD. In responding to each of the deficiencies, restate the deficiency and identify the page number(s) in the revised permit application where each efficiency has been addressed.

Please note that pursuant to Health and Safety Code section 25200.8 and California Code of Regulations, title 22, section 66271.2(e), DTSC may deny permit applications based on a failure of the applicant to respond to a NOD or when the applicant responds with substantially incomplete or substantially unsatisfactory information.

If you have any questions, please contact me at (916) 255-3711 or Randy.Snapp@dtsc.ca.gov.

Sincerely,

Randy Snapp, P.E.
Hazardous Substances Engineer
Permitting Division
Department of Toxic Substances Control

Enclosures: A. First Notice of Deficiency
B. Engineering Services (ESPO) Memorandum

cc: See next page.

cc (via email):

Mr. Wayne Kiso
Clarus Management Solutions, Inc.
waynk@ehs-mgr.com

Mr. Wayne Lorentzen, P.E.
Branch Chief
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Mr. Ryan Batty, P.E.
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ATTACHMENT A:
NOTICE OF DEFICIENCY SPECIFIC COMMENTS

FIRST
NOTICE OF DEFICIENCY FOR
AERC RECYCLING SOLUTIONS
EPA ID NO. CAD982411993

December 9, 2019

The results of DTSC's technical review for the AERC Recycling Solution (AERC) Standardized Permit Application (Application) are presented below. The technical review is formatted to correspond with the sections presented in the Application. For each deficiency, the following are provided: (1) the requirement (i.e. relevant statute and/or regulation, where applicable), which provides the basis for the deficiency; (2) the part/section/page in which the deficiency is found in the application; (3) DTSC's findings; and, (4) instructions for remedying the deficiency.

Comments

1. Part A Application: Pursuant to California Code of Regulations, title 22, section 66270.69.1(a), a standardized permit is only applicable to a facility that does not require a permit under the federal act. Pages 8 to 10 of Part 1093A in the Application lists federal waste code D009 as being stored and treated within AERC. Mercury containing lamps and lamp material are under the California hazardous waste code M003. DTSC is not authorized to permit activities regulated by the federal act within a Standardized Permit. The Application must be revised to clarify if wastes regulated by the federal act will be managed under the terms of the permitted activities.

2. Topographic Map, Section 1, Figures I-2 and I-3: Pursuant to California Code of Regulations, title 22, section 66270.14(b)(18) a topographic map is required to clearly represent the facility. Section I, Figures I-2 and I-3 of the Application have been presented as the topographic maps to fulfill the requirements. The maps do not appear to have a north arrow to provide orientation. The maps do not meet the scale requirements of 1 inch to not more than 200 feet. The Application must be revised to include topographic maps that demonstrate all the information required in California Code of Regulations, title 22, section 66270.14(b)(18).

3. Topographic Map, Section 1, Appendix I-1: Pursuant to California Code of Regulations, title 22, section 66270.14(b)(18)(G) the legal boundaries of the hazardous waste management facility site must be clearly demonstrated. Section 1.2.1 of the Application describes the location size and Appendix A-2 has an exhibit from the lease. The information provided cannot be used to demonstrate

the legal boundaries of AERC. The Application must be updated to clearly show the legal boundaries of the AERC hazardous waste management facility.

4. Topographic Map, Section 1, Figure I-7: Pursuant to California Code of Regulations, title 22, section 66270.14(d)(1)(A) the location of each solid waste management unit must be shown. The Application does not discuss the existence of additional solid waste management units. The Application must be updated to address the requirements for solid waste management units.

5. Operating Record, Section II: Pursuant to California Code of Regulations, title 22, section 66264.73(b) an operating record must be maintained at the facility and contain items under California Code of Regulations, title 22, section 66264.73(b)(1)-(16). Section II.1.4 of the Application addresses items (1), (4), and (5). Section II.1.5 addresses item (7). The Application does not include items (2), (3), (6), and (8)-(16) recordkeeping and reporting section. The Application must be updated to include, as applicable, items under California Code of Regulations, title 22, section 66264.73(b).

6. Waste Analysis Plan, Section III.2: Pursuant to California Code of Regulations, title 22, section 66270.69.1(a), a standardized permit is only applicable to a facility that does not require a permit under the federal act. Tables in Section III.2 of the Application list federal waste code D009 as being stored and treated within AERC. Mercury containing lamps and lamp material are under the California hazardous waste code M003. DTSC is not authorized to permit activities regulated by the federal act within a Standardized Permit. The Application must be revised to clarify if wastes regulated by the federal act will be managed under the terms of the permitted activities.

7. Waste Analysis Plan, Section III.3: Pursuant to California Code of Regulations, title 22, section 66264.13(b) a written Waste Analysis Plan shall include the frequency of analysis. Section III of the Application clearly identifies that glass will be sampled from each bin prior to shipment but does not provide a sampling frequency for end caps or universal tumbler discharge. The Application must be updated to provide a plan and rational for demonstrating residual streams are not hazardous.

8. Facility Design – Storage, Section IV.3: The Application indicates that lamps received in damaged containers will be either repackaged or processed immediately. The Application must clarify where the waste will be stored prior to repackaging and the timeframe for completing repackaging.

9. Facility Design – Storage, Section IV.1.4: This section is titled "90-Day Generator Storage" but the description is for non-hazardous waste. The term 90-

day storage is usually used in the context of on-site generated hazardous waste based on the requirements of California Code of Regulations, title 22, section 66262.34. Recommend clarifying the Application to be clear if this section is related to non-hazardous waste or on-site generated hazardous waste.

10. Training Plan, Section VI: Pursuant to California Code of Regulations, title 22, section 66264.16(a)(4) the general awareness function-specific job training must be completed every 24 months. Section VI.2.3 of the Application requires general awareness and function-specific job training to be completed every 48 months. The Application must be updated to comply with the minimum training requirements.

11. Training Plan, Table VI-1: Pursuant to California Code of Regulations, title 22, section 66264.55 an emergency coordinator must be thoroughly familiar with all aspects of the contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. Section VIII, Attachment 1, of the Application lists the Warehouse Supervisor/Operations, Facility Manager, Shipping & Receiving Technician, and Operations Assistant as possible Emergency Coordinators. Section VI-1 of the Application does not reflect the training requirements required by an emergency coordinator for these positions. The Application must be updated to demonstrate adequate training of emergency coordinators.

12. Training Plan, Section VI.2.1: Pursuant to California Code of Regulations, title 22, section 66264.16 the hazardous waste management training must be directed by a person trained in hazardous waste management procedures. Section VI.2 appears to name the Facility Manager as the person directing the training. Table VI-1 of the Application does not require the Facility Manager to be trained in the hazardous waste handling procedures. The Application must be updated to include a person directing the hazardous waste management training that is qualified to do so.

13. Training Plan, Section VI.2.2: Pursuant to California Code of Regulations, title 22, section 66264.16(b), newly hired employees shall not work in unsupervised positions until they have completed the initial training. The Application discusses the requirement for training but does mention the need for supervision prior to the completion of training.

14. Training Plan, Section VI.3: Pursuant to California Code of Regulations, title 22, section 66264.16(d)(2) a written job description is required for each position. Section VI of the Application does not require a written job description to be

maintained in the facility records. The Application must be updated to include all training record requirements.

15. Procedures to Prevent Hazards, Section VII: Pursuant to California Code of Regulations, title 22, section 66270.14(b)(8) requires application to describe procedures and equipment used to prevent exposure and releases. Section V, of the Application includes a baghouse to remove phosphor powder and a carbon bed to remove mercury vapor. Information on the baghouse is not provided in the application. The application must be updated to include procedures for operating, monitoring, and maintaining the baghouse.

16. Inspection Plan, Section VII.2.2: The Application indicates that the CAL-OSHA indoor air standard for mercury is 0.025 mg/m^3 and the company has conservatively established its action level as 0.025 mg/m^3. The California Department of Public Health (CDPH) Fact Sheet titled "Mercury in the Workplace" states the following:

> *Studies have shown that workers who were exposed to mercury for long periods of time, even at the legal limit (PEL), have had neurological health effects. Maintaining exposures below the PEL is recommended to protect human health.*

The Application should provide further justification for the proposed action level and explain why it is conservative. In addition, the Application should indicate if operations will cease when the levels reach the action level or how long after exceeding the action level until the carbon changeout must occur. It would also be helpful to include the quantity and specification for the carbon used e.g. sulfur-impregnated etc.

17. Contingency Plan, Section VIII: Pursuant to California Code of Regulations, title 22, section 66273.1(b), the provisions of Chapter 23, Articles 1, 2, and 3 do not apply to destination facilities. AERC is a destination facility for universal waste lamps. The cover page of the Contingency Plan indicates that it was prepared in agreement with Title 22, section 66273.36(b)(3). The Application must be revised to ensure that the Contingency Plan complies with the requirements of Chapter 14, Article 4.

18. Contingency Plan, Section VIII: Pursuant to California Code of Regulations, title 22, section 66264.37 an attempt shall be made to make arrangements with local authorities or document a decline in arrangements. Section VIII.6 of the Application does not include arrangements with local authorities. The Application must be updated to include arrangements with local authorities.

19. Closure Plan, Section IX.1, see ESPO memo comment 5: Pursuant to California Code of Regulations, title 22, section 66264.111 the facility shall close in a manner that eliminates, minimizes, or controls the exposures of hazardous waste after closure. Section IX.1 of the Application establishes that AERC will be decontaminated to either background, non-detect, or risk-based standards. The Closure Plan does not provide procedures for determining a background level or a risk-based standard. The Application must be updated to only include performance standards with a detailed procedure for implementation. These changes must be incorporated into the closure cost estimate.

20. Closure Plan, Section IX.5, see ESPO memo comment 7: Pursuant to California Code of Regulations, title 22, section 66264.178 remaining containers, liners, bases, and soil must be free from contamination at closure. Section IX.5 includes a series of wipe samples as the confirmation sampling but does not include locations to demonstrate a representative sampling plan. The decontamination of the underlying concrete does not have a confirmation sampling method. The Application must be updated with a representative sampling plan that demonstrates decontamination of each unit. These changes must be incorporated into the closure cost estimate.

21. Closure Plan, Closure Cost Estimate, see attached ESPO memo comment 1: Pursuant to California Code of Regulations, title 22, section 66264.142(a)(2) the cost estimate must be based on rates from a 3rd party closing the units. DTSC is unable to verify the disposal costs provided in Table IX-1. The Application must be updated to include 3rd party estimates for applicable tasks and include any software used to establish the estimate.

22. Closure Plan, Closure Cost Estimate, see ESPO memo comments 2, 3, 4, 6, and 8: Pursuant to California Code of Regulations, title 22, section 66264.142 a detailed written closure cost estimate shall be submitted to the Department to cover all costs of closure. Section IX of the Application includes a closure cost estimate that is incomplete:

    a. Closure Plan sampling quantities are not consistent with Closure Cost Estimates numbers in Table IX-1.

    b. Table IX-1 lists approximate quantities of waste expected. Pursuant to California Code of Regulations, title 22, section 66264.142(a)(1) the estimate shall be based on the most expensive scenario.

    c. The transportation and disposal of 2,000 pounds of residual wastes referenced in Section IX.2 is not included in the closure cost estimate.

d. If wastes generated during decontamination will be analyzed the cost must be included.

e. The cost of developing a health and safety plan for the closure must be included in the closure cost estimate.

23. Solid Waste Management Units: Pursuant to California Code of Regulations, title 22, section 66270.14(d) an application must contain information on all solid waste management units at the facility. The Application does not address the information requirements for solid waste management units. The Application must be updated to include all information required pursuant to California Code of Regulations, title 22, section 66270.14(d).

24. Hazardous Waste Building Permit: Pursuant to California Health and Safety Code 25200(a) the department shall issue hazardous waste facility permits to facilities that in the judgement of the department meet the State Building Code as it relates to hazardous waste facilities. The Application has not demonstrated that the building is suitable for hazardous waste operations. The Application must be updated to include a building permit or an alternative method to demonstrate that the requirements of California Code of Regulations, title 22, section 66264.31 are met.

25. Financial Responsibility, Liability Coverage: Pursuant to California Code of Regulations, title 22, section 66270.69.4(a) a Series A facility shall have and maintain liability for sudden accidental occurrence in the amount of at least $1 million per occurrence with an annual aggregate of $2 million. The Application does not include information demonstrating this requirement has been met. The Application must be updated to demonstrate liability coverage requirements have been satisfied.

26. Medical Monitoring: The California Department of Public Health (CDPH) Fact Sheet titled "Mercury in the Workplace" recommends medical monitoring for employees that handle mercury. This is emphasized in California Code of Regulations, title 8, section 5192(p)(3). Specifically, urine tests are recommended as the best way to measure long-term exposures. DTSC understands that the Facility may already have an employee medical monitoring program, but this is not discussed in the Application. The Application should be revised to include the medical monitoring program used to quantify employee exposure to mercury.

27. General Requirements: The Application must be updated to correct text that is misleading or could lead to difficulty understanding the text.

a. Facility Operation and Waste Analysis Plan, Section II.3: Subsections of Section II.3 are listed as II.1.x. This appear to be a continuation of subsection II.1 instead of section II.3.

b. Waste Analysis Plan, Section III: The Waste Analysis plan in Section III is labeled as Section C at the top of the pages. The Application must be updated to clearly identify the correct section.

c. Facility Design – Storage: Section IV of the Application has 2 identical sections. Section IV.1.1 and Section IV.1.2 both describe storage area #1. The Application must be updated to remove the duplicate section.

d. Facility Design – Storage, Section IV.1.4: The reference to the western portion of the warehouse may be an error. Figure I-7 shows a 90-day generator storage area on the eastern portion of the warehouse.

e. Contingency Plan, Section VIII: The Contingency Plan table of contents must be updated to have page numbers line up with the appropriate sections.

f. Contingency Plan, Attachment 3: The Contingency Plan emergency equipment table in Attachment 3 has the location of "Decontamination Material" as "Huntwood." The Application must be more specific on location.

28. Application Discrepancies: While reviewing the Application, DTSC identified discrepancies between content of the Application and the manner of operation observed during the November 7, 2019 site visit. These discrepancies are identified below. DTSC recommends that AERC closely review these items and confirm that the Application is correct.

a. Waste Analysis Plan, Section III.1.1: This section states that universal waste lamps are stored for up to ninety days prior to processing or shipment off-site.

b. Facility Design (Storage), Section IV.1.1: This section does not mention the storage of unprocessed lamps in the unit. In addition, any on-site generated RCRA hazardous may only be stored in the unit for 90-days. Finally, confirm that the three container types listed are the only container types that will ever be present.

c. Facility Design (Storage), Section IV.1.3: This section does not mention the storage of non-lamp universal waste. During the recent site visit,

DTSC observed waste including appliances (microwaves) and electronics (computers) stored in the unit.

d. Facility Design (Storage), Section IV.3: The section indicates that all containers will be kept closed except when adding/removing waste. During the recent site visit, DTSC observed open top carboard boxes of non-lamp universal waste in storage unit #2.

Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Gavin Newsom
Governor

MEMORANDUM

TO: Randy Snapp, P.E.
Project Manager
Permitting Division – Sacramento

FROM: Chinh Q. Vu, P.E
10/08/2019
Hazardous Substances Engineer
Engineering and Special Projects Office, Sacramento

REGISTERED PROFESSIONAL ENGINEER
CHINH QUOC VU
C 84702
CIVIL
STATE OF CALIFORNIA

REVIEWER: Perry Myers, P.E. PM
Senior Hazardous Substances Engineer
Engineering and Special Projects Office, Sacramento

SUBJECT: FINANCIAL ASSUARANCE CLOSURE COST ESTIMATE – AERC RECYLCING SOLUTIONS – 30677 HUNTWOOD AVENUE, HAYWARD, CALIFORNIA (Site Code 200329)

DATE: October 8, 2019

DOCUMENTS REVIEWED

Closure Plan, Table IX-1 Closure Cost Estimate, Standardized Permit Application, AERC Recycling Solutions – 30677 Huntwood Avenue, Hayward, California, dated July 30, 2019.

COST ESTMATE REVIEW FINDINGS

Department of Toxic Substances Control (DTSC) Cost Estimating Work Group (CEWG) engineering staff reviewed the Financial Assurance Cost Estimate for the AERC Recycling Solutions, Hayward, California facility to determine if the estimated dollar amount is sufficient for compliance with the financial assurance requirements established for the facility by California Code of Regulations, Title 22, sections 66264.142. Pursuant to these requirements the owner or operator shall prepare and submit to the Department a detailed written estimate, in current dollars, of the cost of

closing the facility in accordance with the requirements established in the approved Closure Plan.

PROJECT SUMMARY

AERC Recycling Solutions, A Clean Earth Company (Clean Earth), stores and treats lamp wastes at their facility located at 30677 Huntwood Avenue, Hayward, California. The lamps are treated using a Balcan MP8000 lamp recycling system that crushes and separates the lamp into non-hazardous glass, non-hazardous scrap metals, and hazardous phosphor powder. In addition, the facility also handles other universal waste including batteries, electronic devices, and mercury-containing equipment not included in the permit.

This closure cost estimate incorporates the following assumptions:

- Maximum storage of the lamps, plant generated hazardous wastes, and phosphor powder material that may not be processed,
- Ship all wastes to a permitted facility for proper disposal,
- Collect a minimum of 17 wipe samples for analysis of mercury, and
- Collect one soil sample at each of the three permitted units, between 0-3' below the concrete slab.

FINANCIAL ASSURANCE COST ESTIMATE DEFICIENCIES

Based on my review of the above listed document, I am unable to verify if the Financial Assurance Cost Estimate provides a reasonable estimate of the cost for a third party to perform the Scope of Work in the event the Owner or Operator will not. Furthermore, the Closure Cost Estimate does not include the cost for all tasks included in the closure plan. The deficiencies found in the Financial Assurance Cost Estimate are listed below.

Specific Comments

1. ESPO is unable to verify the disposal costs included in Table IX-1 Closure Cost Estimate based on "the current pricing from the commercial lamp, ballast and mercury recycling industry." Please provide quotes from third parties for verification. Third party quotes should be provided for all applicable tasks listed in Table IX-1 and as detailed in Section IX of the Closure Plan. If a cost estimating software was used to prepare this cost estimate, please provide the name and version of the software that was used.
2. There are several inconsistencies between Table IX-1, Closure Cost Estimate and the Closure Plan. Please rectify the inconsistencies and update Table IX-1

as needed. If there are reasons for the discrepancy, such as additional sampling is required for quality assurance and quality control (QA/QC), please clearly explain that in both the closure plan and Table IX-1. In addition, consideration should be given to adding a sub-category to separate the costs associated with inventory elimination at Storage Area 1 from Storage Area 2.

3. IX.2 Maximum Inventory Estimate. The Closure plan states that "a maximum of 40 55-gallon drum equivalents of other hazardous wastes (plant scraps, crushed/broken lamps, spent carbon filter media) will also be stored in this area." However, Table IX-1 separated this maximum quantity into 12 55-gallon drums of broken lamps, and 7 cubic yards of plant scraps. For clarity, ESPO recommends stating this in the Closure Plan if this approximate quantity is what is expected.
4. It appears the disposal cost for the 2,000 pounds of residual waste is not included in the cost estimate. In addition, it appears the costs of transporting the residuals (crushed glass, scrap metal, and residual waste) are not included in this estimate. Please include these costs in Table IX.
5. IX.4 Decontamination Procedure. This section states that "the plant and equipment will be cleaned and decontaminated to either background, non-detect or risk-based standards using a combination of wiping with water and vacuuming with a carbon filter system." Since this section does not specify which performance standard will be used, the most expensive option should be used for the purpose of financial assurance. Since both background and risk-based standards will incur additional cost, the most expensive option between the two should be identified and included in the cost estimate. If non-detect is the performance standard, please update the Closure Plan to remove the other two options.
6. IX.4 Decontamination Procedure. It appears the waste analysis cost for wastes generated during closure is not included in the transportation and disposal costs. If multiple samples are required for different media, please clearly state that in the Closure Plan and Table IX-1. In addition, please include the processes and list of equipment to be decontaminated, such as the Balcan MP8000 lamp recycling system.
7. IX.5 Confirmation Sampling Plan for Structure, Equipment and Buildings. Please include a figure to identify the location of the proposed wipe and soil samples to be collected at closure. In addition, it is not clear if confirmation sampling will be collected for equipment, such as the Balcan MP8000 lamp recycling system. Please include the proposed confirmation sampling locations for all equipment to be decontaminated. The total number of confirmation samples should also include applicable QA/QC samples. EPSO recommends a duplicate sample rate of 1 for every ten samples collected.
8. IX.10 Health and Safety Plan. The cost for developing a health and safety plan should be included in Table IX-1. In addition, the cost for air monitoring and sampling, which will likely be required by the health and safety plan, should also be included.

DISCLAIMER

The Cost Estimating Working Group (CEWG) review was based on the information available at the time the review was performed and does not constitute a guarantee of the accuracy of the assumptions used by the responsible party to develop their financial assurance cost estimate. The review of this financial assurance cost estimate is not intended to be all-inclusive as this review does not include a technical assessment and evaluation of the remedial design/controlling document or the accuracy and reliability of data used to support the assumptions.