DSHW-2015-012008

Clean Harbors Aragonite, LLC.
11600 N Aptus Road
P.O. Box 1339
Aragonite, UT 84029

November 23, 2015

Mr. Scott T. Anderson, Director
Division of Waste Management & Radiation Control
Department of Environmental Quality
195 North 1950 West
P.O. Box 144880
Salt Lake City, UT 84114-4880

RE: Class 2 Modification of the
Sludge Pad Direct Burn Station
Clean Harbors Aragonite, LLC
UTD 981 552 177 ✓

Dear Mr. Anderson:

In accordance with Utah Administrative Code (UAC) R315-3-4.3 and 40 CFR 270.42, Appendix I, B6(d), Clean Harbors Aragonite, LLC (CHA) is submitting this Class 2 Modification requesting to direct burn containers of waste from the sludge pad to the front wall of the incinerator's rotary kiln. This will be done by utilizing the feed line located on the bulk solids/sludge pad that connects into the existing direct burn feed line and front wall lances.

The sludge pad direct burn station has been built and has operated under approval by the Division of Waste Management & Radiation Control. The modification request, if granted, would allow CHA to continue to operate the sludge pad direct burn station, feeding waste directly into the incinerator either through the sludge lance (A-103) or to the direct burn lance (A-101). Until the modification is granted, CHA has requested a Temporary Authorization (TA) to operate under.

The facility has reviewed the Part B permit and has proposed, in redline-strikeout format, draft language for those sections that are affected by this modification found in: **Module 3, Attachment 8-Waste Storage, Processing and Tracking, Attachment 10-Design Drawings** and **Attachment 14-Fume Management**. Also, the facility is updating **Attachment 3- Inspection** from the previous Class 1 Modification submitted in August 2015. In addition, drawing **D-034-PI-302-3 Rev 4** has been developed to show the piping and instrumentation for the sludge pad direct burn station. By developing drawing **D-034-PI-302-3 Rev 4** it has caused drawings **D-034-PI-106, D-034-PI-300, D-800-PI-316, D-034-PI-402, D-800-PI-410, D-034-PI-606,** and **D-034-PI-609** to be modified. All changes referenced above are enclosed with this letter as well as the electronic word document for the module and attachments.

The Public Comment period for this modification request is set to begin November 27, 2015, with a public meeting scheduled December 10, 2015. Attached is a copy of the public noticed

I hereby certify under penalty of law that this document was prepared under my direct supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

Should you have any questions concerning this matter, please call me at the number listed below.

Sincerely,

Lonnie Brown
Sr. Compliance Manager, Incineration - Aragonite
Clean Harbors Aragonite, LLC
11600 North Aptus Road
PO Box 1339
Grantsville, Utah 84029-1339
(o) 435.884.8170
(c) 801.440.1560
(f) 435.884.8877
marlowe.michael@cleanharbors.com
www.cleanharbors.com

cc: Carol Rushin, USEPA Region 8
Joff Coombs, E.H.S., M.P.A., Health Officer, Tooele County Health Department

MODULE 3
STORAGE AND TREATMENT IN CONTAINERS

3.A. APPLICABILITY

3.A.1. The requirements of this module pertain to the operation of hazardous waste container storage and processing areas (also referred to as container management areas) at the facility. The Permittee shall comply with all requirements established in this permit when storing or treating any wastes or other materials in the container management areas, including those which do not carry an EPA waste code (e.g., industrial waste, exempt hazardous waste, site generated waste, non-hazardous waste, etc.).

3.A.2. The Permittee may store wastes, as outlined in this module, in the container storage and processing areas specified below, up to the capacities listed. Storage of wastes in containers in any other areas is prohibited. For purposes of determining compliance with the capacity limitations, all containers shall be considered to be full to their respective capacities.

a. Receiving and holding floor area in building E-1 -- 200 55-gallon containers or 11,000 gallons when Bays 1 and 6 are in storage mode; or 292 55-gallon containers or 16,060 gallons when Bays 1 and 6 are in receiving mode.

b. Receiving and holding floor area in building E-5 -- 200 55-gallon containers or 11,000 gallons when Bays 1 and 6 are in storage mode; or 300 55-gallon containers or 16,500 gallons when Bays 1 and 6 are in receiving mode.

c. Bays 3, 4, and 5 in building E-1 -- 192 55-gallon containers each or 10,560 gallons each when in storage mode; or 96 55-gallon containers each or 5,280 gallons each in bays 3, 4, and 5 when in receiving mode;

d. Bays 1, 2, and 6 in building E-5 -- 192 55-gallon containers each or 10,560 gallons each when in storage mode; or 96 55-gallon containers each or 5,280 gallons each in bays 1, 2, and 6 when in receiving mode;

e. Building E-2 -- 1,452 55-gallon containers or 79,860 gallons (exclusive of the workstations);

f. Workstations WS1, WS2, and WS3 in building E-2 -- four 55-gallon containers each or 220 gallons each;

g. Building E-3 -- 2,690 55-gallon containers or 147,950 gallons (includes two safes in row F each with a capacity of 55 gallons);

h. Building E-6 -- 1,348 55-gallon containers or 74,140 gallons;

i. Building E-7 -- 2,552 55-gallon containers or 140,360 gallons;

j. Building E-4 -- 1,452 55-gallon containers or 79,860 gallons (exclusive of the repack area and decant area);

k. Repack area in building E-4 -- four 55-gallon containers or 220 gallons;

l. Decant area in building E-4 -- four 55-gallon containers or 220 gallons;

m. Breezeway -- 256 55-gallon containers or 14,080 gallons (176 55-gallon containers or 9,680 gallons on the breezeway and 80 55-gallon containers or 4,400 gallons on the conveyors);

n. Direct burn pad -- one direct burn vessel (660 gallons);

o. Drive through direct burn station -- one direct burn tanker in the eastern half of the drive through area, designated as T-411 and up to 12 55-gallon containers, designated as T-411D1, T-411D2, or T-411D3, staged for transfer to a tanker (7,500 gallons total);

p. Drive through corrosive direct burn station -- one direct burn tanker or one bulk liquid tote in the western half of the drive through area, designated as T-415 (up to a total of 7,500 gallons);

q. Truck unloading direct burn station (east and center bays of truck unloading) -- two direct burn tankers designated as T-413 and T-414 (15,000 gallons); or 144 55-gallon containers on pallets in the east bay (7,920 gallons) and 72 55-gallon containers on pallets in the center bay (3,960 gallons);

r. E-1 and E-5 receiving docks -- 100 55-gallon containers or 5,500 gallons on pallets in each dock. A combined total of 84 55-gallon containers or 4,620 gallons in one or two refrigerated trailers may also be parked in the E-1 and E-5 receiving docks. The largest bulk container that may be stored in the E-1 or E-5 receiving docks is 4,888 gallons. For determining remaining dock capacity, the capacity of any bulk containers and containers in a refrigerated trailer is subtracted from the total dock capacity (5,500 gallons);

s. E-4 receiving dock -- 40 55-gallon containers or 2,200 gallons on pallets; or one bulk container with a capacity of up to 7,749 gallons in the E-4 dock. In the place of a bulk container, the E-4 receiving dock may store up to 70 55-

gallon containers or 3,850 gallons in a refrigerated trailer parked in the E-4 receiving dock;

t. Cylinder storage area and cylinder feed station combined -- 800 9" diameter by 52" high, compressed gas cylinders or equivalent;

u. Cylinder feed station -- 20 9" diameter by 52" high, compressed gas cylinders or equivalent. This capacity does not include a cylinder or cylinders in the glove box. The glove box at the cylinder feed station will only be used in emergency situations (i.e., leaking cylinders). The glove box will remain empty at all other times;

v. Drum pumping storage on slag pad east of the bulk solids maintenance bay -- 24 55-gallon containers or 1,320 gallons; equipped with portable secondary containment;

w. Drum pumping station -- 4 55-gallon containers or 220 gallons;

x. Bulk solids/sludge pad and sludge pad direct burn station with the direct burn tankers designated as T-412 -- 144 55-gallon containers or 7,920 gallons in containers on pallets; 23,760 gallons in large or bulk containers;

y. Laboratory Cooler -- 2 55-gallon containers or 110 gallons equipped with portable secondary containment.

z. Building 68 -- 56 55-gallon containers or 3,080 gallons;

aa. Building 69-North -- 32 55-gallon containers or 1,760 gallons;

bb. Building 69-South -- 32 55-gallon containers or 1,760 gallons;

cc. Roll-off storage pad located south and east of the tank farm -- 20 20-cubic yard boxes or 80,800 gallons.

The Roll-off Storage Pad is approved for construction in accordance with the drawings and description provided in the Permittee's permit renewal request submitted on December 10, 2009.

The Permittee shall notify the Director at least 14 days prior to beginning construction of the Roll-off Storage Pad. Upon completion of construction, the Permittee shall comply with Condition 1.N. The Permittee is prohibited from using the Roll-off Storage Pad for waste management until the Director provides written approval and incorporates the necessary changes into the permit.

If the Permittee does not begin construction of the Roll-off Storage Pad by June 1, 2013, this authorization to construct shall expire and the Director will modify this permit accordingly. Any future approval to construct the Roll-off Storage Pad beyond June 1, 2013, shall require compliance with Condition 1.D.2.

3.A.3. The Permittee may treat or process wastes in containers in the container management areas listed below. The treatment or other processing operations that may occur include decanting and repacking (including lab pack inspection, lab pack repacking, lab pack solidification, liquid bulk-up, compatibility testing and ignitability screen, container repacking, and debris processing) as described in Attachment 8.

a. Repack area in building E-4.

b. Decant area in building E-4 (decanting only).

c. Workstations WS1, WS2, and WS3 in building E-2.

d. Drive through direct burn station (decanting only).

The Permittee may also shred containers in the shredder, transfer wastes from one tanker to another, feed wastes to the kiln from the direct burn pad, the drive through direct burn station, the truck unloading direct burn station, sludge pad direct burn station, and the drum pumping station, and feed wastes to the afterburner from the corrosive drive through direct burn station as described in Attachment 8. Any other treatment or processing of waste in containers or in the container management areas is prohibited.

3.B. OPERATION AND MAINTENANCE

3.B.1. The Permittee shall maintain the container management areas and secondary containment systems as constructed and in accordance with the drawings contained in Attachment 10.

3.B.2. Modifications to the drawings for the container management areas and secondary containment systems shall be allowed only in accordance with the permit modification requirements in Condition 1.D.

3.B.3. The Permittee shall not proceed with construction or installation of a new or modified container management area or secondary containment system without

the approval of the Director unless construction is allowed as outlined in Condition 1.D.

3.B.4. The Permittee shall maintain the container storage and processing areas and any ancillary equipment and secondary containment systems in good repair. Routine maintenance shall be performed at sufficient frequency to ensure that the container storage and processing areas and any ancillary equipment and secondary containment systems remain in good repair. Malfunctions and deterioration shall be corrected as expeditiously as possible.

3.B.5. The container management areas and secondary containment systems shall be designed, constructed, maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden discharge of hazardous waste or hazardous waste constituents to the air, soil, groundwater, surface water or any other location which could threaten human health or the environment.

3.B.6. The Permittee shall comply with the provisions specified in Attachment 8 -- Waste Storage, Processing, and Tracking.

3.C. PERMITTED AND PROHIBITED WASTES

3.C.1. The Permittee may store, treat, or both in the container storage and processing areas the wastes identified in Condition 2.C.1. unless prohibited in Condition 3.C.2. through 3.C.6. subject to the requirements of this permit.

3.C.2. The following shall not be stored or treated in any of the container storage and processing areas at any time.

a. Any waste or material identified in Condition 2.C.2.

3.C.3. The following shall not be stored in any of the container management areas except buildings E-6 and E-7. However, these may be located in the receiving and holding floor areas of buildings E-1 and E-5, bays 1-6 when in receiving mode, building E-4, the repack area or decant room in building E-4, the breezeway, the direct burn pad, the drive through direct burn station, the drive through corrosive direct burn station, the truck unloading direct burn station, the bulk solids/sludge pad, sludge pad direct burn station, E-1, E-5, and E-4 receiving docks, the drum pumping storage area, or the drum pumping station for a period of up to ten days as part of the process for staging feed to the incinerator or other processing operations. They may only be processed in the repack area or decant room in building E-4 as described in Condition 3.A.3.

a. Liquids with a flash point less than or equal to 140 °F.

3.C.4. The following shall not be stored in any of the container management areas except buildings 68, 69-North and 69-South with the exception outlined below. However, these may be located in the receiving and holding floor areas of buildings E-1 and E-5, building E-4, the repack area or decant room in building E-4, the workstations in E-2, the breezeway, the direct burn pad, the drive through direct burn station, the drive through corrosive direct burn station, the truck unloading direct burn station, the bulk solids/sludge pad, sludge pad direct burn station, E-1, E-5, and E-4 receiving docks, the drum pumping storage area, or the drum pumping station for a period of up to ten days as part of the process for staging feed to the incinerator or other processing operations. Other materials which are potentially incompatible with these materials shall not be stored in the same area as these materials.

a. Cyanide or sulfide bearing waste as described in Utah Admin. Code R315-2-9(f)(v).
b. Oxidizers as described in Utah Admin. Code R315-2-9(d)(1)(iv).

If the Permittee anticipates periods where the capacity in buildings 68, 69-North, and 69-South may not be adequate, such as during turn around periods where waste is not being incinerated or other non-planned events that may result in higher volumes of these materials on site, the Permittee may use the bays in buildings E-1 and E-5 on a temporary basis only after providing oral notification to the Director followed by written notification within seven days and only when buildings 68, 69-North, and 69-South are at capacity. The Permittee shall prioritize the processing of these materials stored in the bays in order to minimize the time these materials are stored in areas other than buildings 68, 69-North, and 69-South. The Permittee shall notify the Director in writing within 72 hours of these materials stored in the bays being processed and indicate in the notice that all further storage of these materials is reverting solely back to buildings 68, 69-North, and 69-South.

3.C.5. The following shall not be stored in any of the container management areas except the compressed gas cylinder storage area and the cylinder feed station. However, they may be off-loaded into buildings E-1 or E-5 and placed into racks while in E-1 or E-5. Compressed gas cylinders shall not remain in buildings E-1 and E-5 more than 24 hours from the time the cylinders are off-loaded before being transferred to the cylinder storage area.

a. Compressed gas cylinders.

3.C.6. The Permittee shall not store water reactive wastes in the drum pumping storage area or the drum pumping station at any time.

3.C.7. Wastes or materials stored or processed through the drive through corrosive direct burn system will be limited to corrosives, Class IB and IC flammable liquids, combustible liquids, highly toxic and toxic material, where these are defined in the International Fire Code.

3.D. OPERATING REQUIREMENTS

3.D.1. If a non-cylinder container holding hazardous waste, except for waste carrying the P999 waste code, is not in good condition (e.g., severe rusting, bulging, apparent structural defects) or it begins to leak, the Permittee shall transfer the hazardous waste from such container, or the container of hazardous waste itself, to a DOT acceptable container in accordance with Attachment 8, as soon as possible, but no later than two hours from the time the problem was first discovered. If a compressed gas cylinder is determined to be leaking, it will be transferred to the glove box at the cylinder feed station where it will be allowed to leak into the glove box while the glove box is exhausted to the incinerator. If the incinerator is down when a cylinder is leaking, the cylinder will be transferred to an isolated portion of the property and allowed to leak until empty. If a container holding waste carrying the P999 waste code is not in good condition or begins to leak, the Permittee shall follow Condition 3.D.28.

3.D.2. The Permittee shall assure that wastes or other materials in containers are compatible with the containers. Containers must be made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste stored in them, so that the ability of the containers to contain the waste is not impaired.

3.D.3. The Permittee shall not place incompatible waste or materials in the same container.

3.D.4. The Permittee shall not place hazardous waste or materials in an unwashed container that previously held an incompatible waste or material.

3.D.5. A container holding a waste that is incompatible with any waste or other material shall be separated from the other waste or material by placing it in building 68, 69-North, or 69-South as appropriate. No incompatible wastes shall be stored in the container management areas identified in Condition 3.A.2.a. through s., and u. through y. and cc. except under the limited circumstances outlined in Condition 3.C.4. Compressed gas cylinders shall be stored in racks in the cylinder storage area with compatible materials in each rack. Cylinder compatibility and rack separation shall be in accordance with the International Fire Code.

3.D.6. Containers shall always be closed except when the Permittee is adding or removing wastes or treatment reagents, as allowed by this permit, to or from the containers. Containers of waste identified by the P999 waste code must remain closed at all times while at the facility, but may have the retaining ring or other device securing the lid or cover to the container, loosened for safety reasons, as necessary, immediately prior to being fed to the incinerator. For overpacks identified by the P999 waste code, both the inner lid and outer lid may be loosened immediately prior to being fed to the incinerator.

3.D.7. Ventilation of open containers shall be conducted in accordance with Attachment 14. Use of the fume exhausters in buildings E-1 and E-5 during sampling or waste inspection is optional.

3.D.8. Containers shall not be opened, handled, stored, or managed in a manner which may rupture the containers or cause them to leak.

3.D.9. The Permittee shall unload any transport vehicle carrying containers within ten days of being received at the facility. Small containers shall be placed in the receiving and holding floor areas of buildings E-1 or E-5, bays 1-6 when in receiving mode, or in the temporary extensions of the receiving areas outlined in Attachment 8 until the material has been accepted. Bulk containers may be placed in the drive through direct burn station (tankers only), the drive through corrosive direct burn station (a tanker or a bulk liquid tote only), the truck unloading direct burn station (tankers only), the bulk solids/sludge pad, sludge pad direct burn station, or E-1, E-5, and E-4 receiving docks prior to acceptance. Compressed gas cylinders may be placed into the cylinder storage area prior to acceptance. Those cylinders in the cylinder storage area that are not yet accepted shall be clearly identified in a unique manner from those cylinders that have been accepted.

3.D.10. The Permittee shall maintain sufficient aisle space in the container management areas to allow the unobstructed movement of personnel, fire protection equipment, discharge control equipment, and decontamination equipment to all areas of the container management areas. Sufficient aisle space shall be maintained such that access can be made to each container to check for leaks, container damage or deterioration, and also to view the barcode label. Containers shall be placed, and aisle space maintained, as shown on drawings D-034-M-401, D-800-M-402, and D-800-M-403 in Attachment 10. For larger bulk containers (such as tankers or rolloffs) being stored on the bulk solids/sludge pad, one bulk container occupies the same space as one row of six pallets shown on drawing D-800-M-403. For bulk containers with a similar footprint as a pallet (such as a bulk liquid tote or Flo-bin), the bulk container occupies the same space as one pallet of drums. Bulk containers shall be stored in the same locations as the pallets or rows of pallets indicated on drawing D-800-M-403. For larger bulk containers (such as tankers or rolloffs) being stored in the E-1, E-5, and E-4 receiving docks, one bulk

container occupies the same space as two rows of five pallet locations shown on drawing D-800-M-402. For bulk containers with a similar footprint as a pallet (such as a bulk liquid tote or Flo-bin), the bulk container occupies the same space as one pallet of drums. For the truck unloading direction burn station, no containers on pallets shall be stored in a bay at the same time as a bulk container is being stored in the bay.

3.D.11. The Permittee shall not locate containers holding ignitable or reactive waste, including those which have not yet been accepted, within 50 feet of the facility's property line.

3.D.12. No smoking shall be allowed within 50 feet of any of the container management areas. The Permittee shall take precautions to prevent accidental ignition or reaction of waste. The waste shall be separated and protected from sources of ignition or reaction including, but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. Such sources of ignition shall be allowed only after adequate additional precautions have been taken to prevent ignition of wastes or other materials and a hot work permit has been issued. Notwithstanding this condition, a hot work permit is not required for performing storage and acceptance (fingerprint) analyses within the hoods of the E-5 fingerprint area.

3.D.13. The Permittee shall maintain a record of the location of each container in the container storage areas. A history of the movement of each container of waste will be maintained from the time it is placed into one of the container management areas until it is either incinerated or manifested off-site. The Permittee shall comply with the waste tracking provisions in Attachment 8. The Permittee shall provide access to the electronic waste tracking system portion of the operating record for the Director to review. This shall be accomplished by making available a remote link to the computer system and the appropriate query system for accessing the required data. Data to be accessible include manifest information, profile information, processing waste class code, final code dates for wastes that have been accepted or rejected, load sample analyses, weights, current locations, movement histories, and the dates/times incinerated or transferred off-site. Queries shall be provided to access the information for individual drums, manifests, EPA ID numbers, lot numbers, and profiles. It shall also provide the information for containers based on location at the facility, status (rejects, infectious wastes, etc.), and characteristics (ignitables, cyanides, sulfides, oxidizers, corrosives, reactives, etc.).

3.D.14. Several small containers which have been shrink-wrapped or otherwise bound together and attached to a pallet and shipped as a single container may be accepted

and managed at the facility as one container. If the containers on a pallet are not bound as described above, they must be managed as individual containers.

3.D.15. Containers, not including gas cylinders and bulk containers, shall be stored on pallets. Compressed gas cylinders are stored in racks as outlined below. Containers on pallets shall be stored on racks where available and as outlined below. Where racks are not available, containers may be stacked on pallets as outlined below. The containers shall be stacked neatly, wrapped, or both, to provide stability and in a manner that will not cause them to fall or leak.

a. For large containers (≥ 50 gallon capacity) the maximum stacking height per pallet is one container. For small containers (<50 gallon capacity), the maximum stacking height per pallet is 48 inches.

b. Containers shall not be stacked more than:
three pallets high in buildings E-2 (exclusive of the workstations and spaces 1 through 12 in row G), E-3 (exclusive of safes in spaces 4 and 5 in row F), E-4 (exclusive of the decant area and repack area), and E-7 (exclusive of row F, space 19);
two pallets high in building E-6 (exclusive of spaces 1 through 5 in row H), truck unloading direct burn, the refrigerated trailers parked in E-1, E-5, or E-4 receiving docks, the breezeway, spaces 1 through 12 in row G of building E-2, space 19 in row F of building E-7, bays 1-6 when in storage mode and buildings 68, 69-North and 69-South;
one pallet high in the receiving and holding areas of buildings E-1 and E-5, E-1, E-5, and E-4 receiving docks, bulk solids/sludge pad, laboratory cooler, bays 1-6 when in receiving mode, WS1-WS3, the decant area and repack area in building E-4, the safes in spaces 4 and 5 in row F of building E-3, spaces 1 through 5 in row H of building E-6, the drum pumping storage area, the drum pumping station, and the drive through direct burn station.

c. Containers placed or stacked on the feed conveyors need not be on pallets. If they are stacked, they must be stacked in such a way that they will not fall as they move on the conveyor. Stacking height is limited to 48 inches on the conveyors.

d. Containers that have been legally shipped but do not meet the height limitations specified in Condition 3.D.15.a. may be off-loaded and held in the receiving and holding floor areas of buildings E-1 or E-5 or in bays 1-6 when in receiving mode. However, they must be reconfigured to meet the size requirements prior to placement in any of the other container management areas.

e. Compressed gas cylinders shall be stored in racks containing compatible gases, with different types of gases separated in accordance with the International Fire Code. The cylinders shall be secured to prevent falling as described in IFC 30.

3.D.16. The Permittee shall prepare and maintain on site an infectious waste management plan that addresses the applicable requirements of Utah Admin. Code R315-316-2.

3.D.17. Except for sharps, infectious waste shall be contained in plastic bags or inside rigid containers. The bags shall be securely tied and the containers shall be securely sealed to prevent leakage or expulsion of solid or liquid wastes during storage and handling.

3.D.18. Infectious waste sharps shall be contained for storage, handling, and treatment in leak-proof, rigid, puncture-resistant containers which are taped closed or tightly lidded to preclude loss of contents.

3.D.19. All containers for containment of any infectious waste shall be red or orange, or if containers are not red or orange, shall be clearly identified with the international biohazard sign and one of the following labels: "INFECTIOUS WASTE," "BIOMEDICAL WASTE," or "BIOHAZARD."

3.D.20. A rigid infectious waste container may be reused for infectious or non-infectious waste if it is thoroughly washed and decontaminated each time it is emptied or if the surfaces of the container have been completely protected from contamination by disposable, unpunctured, or undamaged liners, bags or other devices that are removed with the infectious waste, and the surface of the liner has not been damaged or punctured.

3.D.21. Storage and containment areas must protect infectious waste from the elements, be ventilated to the outside, be only accessible to authorized persons, and be marked with prominent warning signs on, or adjacent to, the exterior doors or gates. The warning signs shall contain the international biohazard sign and shall state: "CAUTION - INFECTIOUS WASTE STORAGE AREA - UNAUTHORIZED PERSONS KEEP OUT" and must be easily read during daylight from a distance of 25 feet.

3.D.22. If infectious waste is on site longer than seven days, it shall be stored at or below 40 degrees Fahrenheit.

3.D.23. Infectious waste shall be incinerated as soon as possible, but not to exceed 60 days after collection from the generator.

3.D.24. Building E-7 shall have a minimum of five air changes per hour.

3.D.25. The LEL monitor in building E-7 shall alarm at 10% LEL.

3.D.26. Storage of flammable liquids in building E-7 shall be limited to metal containers.

3.D.27. The Permittee shall maintain the foam-water fire protection system to each of the E-6 and E-7 container storage buildings.

3.D.28. If a container holding waste identified by the P999 waste code is not in good condition (e.g., it exhibits severe rusting, bulging, apparent structural defects) or it begins to leak, the Permittee shall immediately secure the area around the container and prohibit access to the area. The Permittee shall immediately notify the generator of the waste and request the generator's assistance in responding to the situation. Access to the container in question shall be prohibited until the generator advises the Permittee on proper management of the situation. Only after the generator has advised the Permittee and recommended that the Permittee respond, may the Permittee approach the container and conduct the necessary response/cleanup activities. The Permittee shall comply with Condition 3.D.1., using the generator if necessary to contain, collect and repackage the waste. The Permittee shall also orally notify the Director within 24 hours of discovering the problem/leak. These notifications, the generator's advice and all cleanup and response shall be documented in the facility operating record.

3.D.29. Prior to using the bulk solids/sludge pad, truck unloading direct burn station, and the E-1, E-5, or E-4 receiving docks for the storage of large containers holding bulk materials or for the storage of containers on pallets, the storage area(s) shall be delineated by marking the concrete with durable paint where the containers/pallets of containers are to be stored.

3.D.30. When the bulk solids/sludge pad is being used to store waste, it shall be protected with physical barriers sufficient to prevent vehicular damage to containers in the storage areas. The Permittee shall also operate the bulk solids/sludge pad in a manner that permits access to, and the movement of personnel, fire protection equipment, discharge control equipment, and decontamination equipment to all areas of the container storage pad while also allowing the necessary access to adjacent waste management units.

3.E. CONTAINMENT

3.E.1. The secondary containment systems shall be operated and maintained so that they are free of both cracks and gaps and are sufficiently impervious to contain leaks,

spills, and accumulated precipitation until the collected material is detected and removed.

3.E.2. The Permittee shall empty all liquid and remove accumulated waste from a sump or secondary containment area no later than 24 hours after discovering the contents. All liquids and other materials collected from a sump or secondary containment area shall be considered a hazardous waste and shall be managed appropriately.

3.E.3. Containment for 10% of the maximum capacity volume of containers or the volume of the largest container, whichever is greater, shall be maintained for each container management area identified in Condition 3.A.2., with the exception of the cylinder storage area and cylinder feed station, which require no secondary containment.

3.E.4. The Permittee shall maintain the system for diverting liquid run-on around the direct burn pad in good repair so that run-on to the pad is prevented.

3.E.5. The Permittee shall maintain the secondary containment system for the direct burn vessel feed area so that any liquid will drain from the direct burn pad to sump SP-624 without puddling.

3.F. DIRECT BURN VESSELS

3.F.1. The Permittee is authorized to use up to four direct burn vessels, subject to the requirements of this module. Each direct burn vessel shall be marked with a unique identifying number and shall be tracked in accordance with Attachment 8.

3.F.2. All direct burn vessels shall be stored only in the permitted container management areas specified in Condition 3.A.2.

3.F.3. The Permittee shall maintain and operate the direct burn vessels in accordance with the drawings and procedures contained in Attachments 10 and 8.

3.F.4. Modifications to the drawings and operations for the direct burn vessels shall be allowed only in accordance with the permit modification requirements in Condition 1.D.

3.F.5. All direct burn vessels shall be nitrogen blanketed.

3.F.6. All direct burn vessels shall have emergency pressure relief valves that shall be vented to atmosphere.

3.F.7. All direct burn vessels shall be equipped with an anti-static inlet.

3.F.8. The Permittee shall empty and visually inspect each direct burn vessel for the general condition of the vessel and measure the corrosion of each direct burn vessel at least once each year and certify that it can safely store hazardous waste. The certification shall document that the structural support, seams, connections, and pressure controls for each vessel have been adequately designed and that the vessel has sufficient structural strength and compatibility with the waste to be stored to ensure that it will not collapse, rupture, or fail. This certification must be made by an independent, qualified Utah registered professional engineer.

3.F.9. The Permittee shall not overfill any of the direct burn vessels.

3.F.10. The direct burn vessels shall always be closed except when the Permittee is adding or removing wastes, as allowed by this permit, to or from the vessels.

3.G. DIRECT BURN TANKERS (DRIVE THROUGH DIRECT BURN STATION SLUDGE PAD DIRECT BURN STATION, AND TRUCK UNLOADING DIRECT BURN STATION)

3.G.1. Tankers of waste to be fed through the drive through direct burn system and containers to be decanted to a tanker shall be parked or placed within the drive through direct burn station secondary containment (eastern half of the former loadout area south of the slag pad). Tankers of waste to be fed from the truck unloading direct burn system shall be parked in the east bay of the truck unloading building. See drawing D-034-M-002.

Tankers of waste to be fed through the , sludge pad direct burn station system shall be parked or placed within the bulk solids/sludge pad and sludge pad direct burn station secondary containment (south of the bulk solids tower). See drawing D-034-M-002

3.G.2. Wastes stored in either direct burn tanker station (drive through, sludge pad direct burn station, or truck unloading) or fed from either tanker to the kiln shall be tracked in accordance with Attachment 8.

3.G.3 The Permittee shall maintain and operate the drive through, sludge pad direct burn station, and truck unloading direct burn tanker systems in accordance with Attachments 8 and 10.

3.G.4. Modifications to the operation of the drive through, sludge pad, and truck unloading direct burn tanker systems shall be in accordance with Condition 1.D.

3.G.5. The drive through, sludge pad, and truck unloading direct burn tankers shall be nitrogen blanketed.

3.G.6. The drive through, sludge pad, and truck unloading direct burn tankers shall be grounded prior to and while being fed, filled, or both.

3.G.7. The Permittee shall comply with 40 CFR 266.111(d)(2) as incorporated by reference into Utah Admin. Code R315-14-7. The certification by the local Fire Marshall shall be obtained prior to the drive through, sludge pad, and truck unloading direct burn tanker systems being placed into operation.

3.G.8. As viewed from an area between the afterburner and front wall of the kiln, the Permittee shall maintain clear visibility of the direct burn tanker, sludge pad, and the manifold/pump area of the drive through direct burn station at all times waste is present in the unit. The Permittee shall maintain a view of the direct burn tanker and the manifold/pump area of the truck unloading direct burn station through a video camera connected to a monitor in the control room at all times waste is present in the unit. An operator shall be present at the decant area whenever decant operations are occurring in the drive through direct burn station.

3.G.9. Wastes from either the drive through direct burn system, sludge pad direct burn station system, or the truck unloading direct burn system may be fed to either the sludge lance (A-103) or to the direct burn lance (A-101). While feeding wastes from either the drive through direct burn system, sludge pad direct burn station system, or the truck unloading direct burn system to the sludge lance (A-103), the lines shall be isolated from the sludge recirculation line to prevent ignitable or incompatible wastes from entering either of the sludge storage tanks (T-401 or T-406). Following the feeding of wastes from either the drive through direct burn system or the truck unloading direct burn system to the sludge lance (A-103), the lines shall be adequately flushed with an appropriate solvent to prevent ignitable or incompatible wastes from entering either of the sludge storage tanks (T-401 or T-406).

3.G.10. When using the vacuum pump to decant from a container to a direct burn tanker, the vacuum pump shall automatically shut down and decant operations cease when the LEL measurement of the combined dilution air and vacuum pump vent reach 60% LEL.

3.G.11. When the backup carbon adsorption system is being used, no vacuum pump transfer of waste from a container to a tanker is allowed.

3.H. DIRECT BURN FROM A CONTAINER

3.H.1. Containers of waste to be fed through the drum pumping station shall be placed inside the glove box at the drum pumping station. See drawing D-034-M-002. The glove box will be sealed and vented prior to opening the drums or feeding to the kiln when processing flammable liquids, oxidizers, toxic and highly toxic materials.

3.H.2. Wastes processed through the drum pumping station shall be tracked in accordance with Attachment 8.

3.H.3. The Permittee shall maintain and operate the drum pumping station in accordance with Attachments 8 and 10.

3.H.4. Modifications to the operation of the drum pumping station shall be in accordance with Condition 1.D.

3.H.5. All containers holding flammable liquids at the drum pumping station shall be grounded prior to and while the waste is being fed to the kiln from the drum pumping station. The glove box and feed system shall also be grounded according to supplier recommended practice.

3.H.6. The Permittee shall comply with 40 CFR 266.111(d)(2) as incorporated by reference into Utah Admin. Code R315-14-7. The certification by the local Fire Marshall shall be obtained prior to the drum pumping station being placed into operation.

3.H.7. The drum pumping feed station feed system shall be flushed with an appropriate fluid prior to feeding an incompatible waste so that reactions will not occur in the feed system.

3.H.8. Nitrogen blanketing will be used as needed to prevent explosive atmospheres from developing in the glove box and piping system.

3.H.9. The glove box shall be vented to the afterburner. In the event that air to the eductor fails, it shall automatically switch to nitrogen to continue venting the glove box.

3.H.10. The glove box shall be equipped with a fire detection system and a CO_2 fire suppression system. This system shall be maintained to immediately extinguish any fire in the glove box.

3.H.11. The glove box shall be equipped with an LEL sensor and alarms to provide warnings prior to the development of potentially explosive situations. The Permittee shall use these alarms and take appropriate corrective actions to prevent fires and explosions.

3.H.12. The glove box shall be equipped with explosion panels designed to protect workers in the area.

3.H.13. Prior to using the drum pumping station storage area, the storage area shall be delineated by marking the concrete with durable paint where the pallets of drums are to be stored.

3.H.14. When the drum pumping station storage area is in use, it shall be protected with physical barriers sufficient to prevent vehicular damage to containers in the area. It shall also be maintained clear of equipment, containers, debris, or other objects such that access to, and the movement of personnel, fire protection equipment, discharge control equipment, and decontamination equipment to all areas of the container storage area will not be impeded.

3.I. CORROSIVE DIRECT BURN TANKERS AND TOTES (DRIVE THROUGH CORROSIVE DIRECT BURN STATION)

3.I.1. Tankers or bulk liquid totes of waste to be fed through the drive through corrosive direct burn system shall be parked or placed within the drive through corrosive direct burn station secondary containment (western half of the former loadout area south of the slag pad). See drawing D-034-M-002.

3.I.2. Wastes stored in or fed from the drive through corrosive direct burn station shall be tracked in accordance with Attachment 8.

3.I.3. The Permittee shall maintain and operate the drive through corrosive direct burn tanker system in accordance with Attachments 8 and 10.

3.I.4. Modifications to the operation of the drive through corrosive direct burn tanker system shall be in accordance with Condition 1.D.

3.I.5 All tankers and bulk liquid totes in the drive through corrosive direct burn station shall be nitrogen blanketed.

3.I.6. All tankers and bulk liquid totes in the drive through corrosive direct burn station shall be grounded while being fed to the incinerator.

3.I.7. The Permittee shall comply with 40 CFR 266.111(d)(2) as incorporated by reference into Utah Admin. Code R315-14-7. The certification by the local Fire Marshall shall be obtained prior to the drive through corrosive direct burn tanker system being placed into operation.

3.I.8. The Permittee shall maintain a view of the corrosive direct burn tanker or tote and the manifold/pump area of the drive through corrosive direct burn station through a video camera connected to a monitor in the control room at all times waste is present in the unit.

3.I.9. Wastes from the drive through corrosive direct burn system may only be fed to the south afterburner burner location A-106B-5.

MODULE 3
STORAGE AND TREATMENT IN CONTAINERS

3.A. APPLICABILITY

3.A.1. The requirements of this module pertain to the operation of hazardous waste container storage and processing areas (also referred to as container management areas) at the facility. The Permittee shall comply with all requirements established in this permit when storing or treating any wastes or other materials in the container management areas, including those which do not carry an EPA waste code (e.g., industrial waste, exempt hazardous waste, site generated waste, non-hazardous waste, etc.).

3.A.2. The Permittee may store wastes, as outlined in this module, in the container storage and processing areas specified below, up to the capacities listed. Storage of wastes in containers in any other areas is prohibited. For purposes of determining compliance with the capacity limitations, all containers shall be considered to be full to their respective capacities.

a. Receiving and holding floor area in building E-1 -- 200 55-gallon containers or 11,000 gallons when Bays 1 and 6 are in storage mode; or 292 55-gallon containers or 16,060 gallons when Bays 1 and 6 are in receiving mode.

b. Receiving and holding floor area in building E-5 -- 200 55-gallon containers or 11,000 gallons when Bays 1 and 6 are in storage mode; or 300 55-gallon containers or 16,500 gallons when Bays 1 and 6 are in receiving mode.

c. Bays 3, 4, and 5 in building E-1 -- 192 55-gallon containers each or 10,560 gallons each when in storage mode; or 96 55-gallon containers each or 5,280 gallons each in bays 3, 4, and 5 when in receiving mode;

d. Bays 1, 2, and 6 in building E-5 -- 192 55-gallon containers each or 10,560 gallons each when in storage mode; or 96 55-gallon containers each or 5,280 gallons each in bays 1, 2, and 6 when in receiving mode;

e. Building E-2 -- 1,452 55-gallon containers or 79,860 gallons (exclusive of the workstations);

f. Workstations WS1, WS2, and WS3 in building E-2 -- four 55-gallon containers each or 220 gallons each;

g. Building E-3 -- 2,690 55-gallon containers or 147,950 gallons (includes two safes in row F each with a capacity of 55 gallons);

h. Building E-6 -- 1,348 55-gallon containers or 74,140 gallons;

i. Building E-7 -- 2,552 55-gallon containers or 140,360 gallons;

j. Building E-4 -- 1,452 55-gallon containers or 79,860 gallons (exclusive of the repack area and decant area);

k. Repack area in building E-4 -- four 55-gallon containers or 220 gallons;

l. Decant area in building E-4 -- four 55-gallon containers or 220 gallons;

m. Breezeway -- 256 55-gallon containers or 14,080 gallons (176 55-gallon containers or 9,680 gallons on the breezeway and 80 55-gallon containers or 4,400 gallons on the conveyors);

n. Direct burn pad -- one direct burn vessel (660 gallons);

o. Drive through direct burn station -- one direct burn tanker in the eastern half of the drive through area, designated as T-411 and up to 12 55-gallon containers, designated as T-411D1, T-411D2, or T-411D3, staged for transfer to a tanker (7,500 gallons total);

p. Drive through corrosive direct burn station -- one direct burn tanker or one bulk liquid tote in the western half of the drive through area, designated as T-415 (up to a total of 7,500 gallons);

q. Truck unloading direct burn station (east and center bays of truck unloading) -- two direct burn tankers designated as T-413 and T-414 (15,000 gallons); or 144 55-gallon containers on pallets in the east bay (7,920 gallons) and 72 55-gallon containers on pallets in the center bay (3,960 gallons);

r. E-1 and E-5 receiving docks -- 100 55-gallon containers or 5,500 gallons on pallets in each dock. A combined total of 84 55-gallon containers or 4,620 gallons in one or two refrigerated trailers may also be parked in the E-1 and E-5 receiving docks. The largest bulk container that may be stored in the E-1 or E-5 receiving docks is 4,888 gallons. For determining remaining dock capacity, the capacity of any bulk containers and containers in a refrigerated trailer is subtracted from the total dock capacity (5,500 gallons);

s. E-4 receiving dock -- 40 55-gallon containers or 2,200 gallons on pallets; or one bulk container with a capacity of up to 7,749 gallons in the E-4 dock. In the place of a bulk container, the E-4 receiving dock may store up to 70 55-

gallon containers or 3,850 gallons in a refrigerated trailer parked in the E-4 receiving dock;

t. Cylinder storage area and cylinder feed station combined -- 800 9" diameter by 52" high, compressed gas cylinders or equivalent;

u. Cylinder feed station -- 20 9" diameter by 52" high, compressed gas cylinders or equivalent. This capacity does not include a cylinder or cylinders in the glove box. The glove box at the cylinder feed station will only be used in emergency situations (i.e., leaking cylinders). The glove box will remain empty at all other times;

v. Drum pumping storage on slag pad east of the bulk solids maintenance bay -- 24 55-gallon containers or 1,320 gallons; equipped with portable secondary containment;

w. Drum pumping station -- 4 55-gallon containers or 220 gallons;

x. Bulk solids/sludge pad and sludge pad direct burn station with the direct burn tankers designated as T-412 -- 144 55-gallon containers or 7,920 gallons in containers on pallets; 23,760 gallons in large or bulk containers;

y. Laboratory Cooler -- 2 55-gallon containers or 110 gallons equipped with portable secondary containment.

z. Building 68 -- 56 55-gallon containers or 3,080 gallons;

aa. Building 69-North -- 32 55-gallon containers or 1,760 gallons;

bb. Building 69-South -- 32 55-gallon containers or 1,760 gallons;

cc. Roll-off storage pad located south and east of the tank farm -- 20 20-cubic yard boxes or 80,800 gallons.

The Roll-off Storage Pad is approved for construction in accordance with the drawings and description provided in the Permittee's permit renewal request submitted on December 10, 2009.

The Permittee shall notify the Director at least 14 days prior to beginning construction of the Roll-off Storage Pad. Upon completion of construction, the Permittee shall comply with Condition 1.N. The Permittee is prohibited from using the Roll-off Storage Pad for waste management until the Director provides written approval and incorporates the necessary changes into the permit.

If the Permittee does not begin construction of the Roll-off Storage Pad by June 1, 2013, this authorization to construct shall expire and the Director will modify this permit accordingly. Any future approval to construct the Roll-off Storage Pad beyond June 1, 2013, shall require compliance with Condition 1.D.2.

3.A.3. The Permittee may treat or process wastes in containers in the container management areas listed below. The treatment or other processing operations that may occur include decanting and repacking (including lab pack inspection, lab pack repacking, lab pack solidification, liquid bulk-up, compatibility testing and ignitability screen, container repacking, and debris processing) as described in Attachment 8.

a. Repack area in building E-4.

b. Decant area in building E-4 (decanting only).

c. Workstations WS1, WS2, and WS3 in building E-2.

d. Drive through direct burn station (decanting only).

The Permittee may also shred containers in the shredder, transfer wastes from one tanker to another, feed wastes to the kiln from the direct burn pad, the drive through direct burn station, the truck unloading direct burn station, sludge pad direct burn station, and the drum pumping station, and feed wastes to the afterburner from the corrosive drive through direct burn station as described in Attachment 8. Any other treatment or processing of waste in containers or in the container management areas is prohibited.

3.B. OPERATION AND MAINTENANCE

3.B.1. The Permittee shall maintain the container management areas and secondary containment systems as constructed and in accordance with the drawings contained in Attachment 10.

3.B.2. Modifications to the drawings for the container management areas and secondary containment systems shall be allowed only in accordance with the permit modification requirements in Condition 1.D.

3.B.3. The Permittee shall not proceed with construction or installation of a new or modified container management area or secondary containment system without

the approval of the Director unless construction is allowed as outlined in Condition 1.D.

3.B.4. The Permittee shall maintain the container storage and processing areas and any ancillary equipment and secondary containment systems in good repair. Routine maintenance shall be performed at sufficient frequency to ensure that the container storage and processing areas and any ancillary equipment and secondary containment systems remain in good repair. Malfunctions and deterioration shall be corrected as expeditiously as possible.

3.B.5. The container management areas and secondary containment systems shall be designed, constructed, maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden discharge of hazardous waste or hazardous waste constituents to the air, soil, groundwater, surface water or any other location which could threaten human health or the environment.

3.B.6. The Permittee shall comply with the provisions specified in Attachment 8 -- Waste Storage, Processing, and Tracking.

3.C. PERMITTED AND PROHIBITED WASTES

3.C.1. The Permittee may store, treat, or both in the container storage and processing areas the wastes identified in Condition 2.C.1. unless prohibited in Condition 3.C.2. through 3.C.6. subject to the requirements of this permit.

3.C.2. The following shall not be stored or treated in any of the container storage and processing areas at any time.

a. Any waste or material identified in Condition 2.C.2.

3.C.3. The following shall not be stored in any of the container management areas except buildings E-6 and E-7. However, these may be located in the receiving and holding floor areas of buildings E-1 and E-5, bays 1-6 when in receiving mode, building E-4, the repack area or decant room in building E-4, the breezeway, the direct burn pad, the drive through direct burn station, the drive through corrosive direct burn station, the truck unloading direct burn station, the bulk solids/sludge pad, sludge pad direct burn station, E-1, E-5, and E-4 receiving docks, the drum pumping storage area, or the drum pumping station for a period of up to ten days as part of the process for staging feed to the incinerator or other processing operations. They may only be processed in the repack area or decant room in building E-4 as described in Condition 3.A.3.

a. Liquids with a flash point less than or equal to 140 °F.

3.C.4. The following shall not be stored in any of the container management areas except buildings 68, 69-North and 69-South with the exception outlined below. However, these may be located in the receiving and holding floor areas of buildings E-1 and E-5, building E-4, the repack area or decant room in building E-4, the workstations in E-2, the breezeway, the direct burn pad, the drive through direct burn station, the drive through corrosive direct burn station, the truck unloading direct burn station, the bulk solids/sludge pad, sludge pad direct burn station, E-1, E-5, and E-4 receiving docks, the drum pumping storage area, or the drum pumping station for a period of up to ten days as part of the process for staging feed to the incinerator or other processing operations. Other materials which are potentially incompatible with these materials shall not be stored in the same area as these materials.

a. Cyanide or sulfide bearing waste as described in Utah Admin. Code R315-2-9(f)(v).
b. Oxidizers as described in Utah Admin. Code R315-2-9(d)(1)(iv).

If the Permittee anticipates periods where the capacity in buildings 68, 69-North, and 69-South may not be adequate, such as during turn around periods where waste is not being incinerated or other non-planned events that may result in higher volumes of these materials on site, the Permittee may use the bays in buildings E-1 and E-5 on a temporary basis only after providing oral notification to the Director followed by written notification within seven days and only when buildings 68, 69-North, and 69-South are at capacity. The Permittee shall prioritize the processing of these materials stored in the bays in order to minimize the time these materials are stored in areas other than buildings 68, 69-North, and 69-South. The Permittee shall notify the Director in writing within 72 hours of these materials stored in the bays being processed and indicate in the notice that all further storage of these materials is reverting solely back to buildings 68, 69-North, and 69-South.

3.C.5. The following shall not be stored in any of the container management areas except the compressed gas cylinder storage area and the cylinder feed station. However, they may be off-loaded into buildings E-1 or E-5 and placed into racks while in E-1 or E-5. Compressed gas cylinders shall not remain in buildings E-1 and E-5 more than 24 hours from the time the cylinders are off-loaded before being transferred to the cylinder storage area.

a. Compressed gas cylinders.

3.C.6. The Permittee shall not store water reactive wastes in the drum pumping storage area or the drum pumping station at any time.

3.C.7. Wastes or materials stored or processed through the drive through corrosive direct burn system will be limited to corrosives, Class IB and IC flammable liquids, combustible liquids, highly toxic and toxic material, where these are defined in the International Fire Code.

3.D. OPERATING REQUIREMENTS

3.D.1. If a non-cylinder container holding hazardous waste, except for waste carrying the P999 waste code, is not in good condition (e.g., severe rusting, bulging, apparent structural defects) or it begins to leak, the Permittee shall transfer the hazardous waste from such container, or the container of hazardous waste itself, to a DOT acceptable container in accordance with Attachment 8, as soon as possible, but no later than two hours from the time the problem was first discovered. If a compressed gas cylinder is determined to be leaking, it will be transferred to the glove box at the cylinder feed station where it will be allowed to leak into the glove box while the glove box is exhausted to the incinerator. If the incinerator is down when a cylinder is leaking, the cylinder will be transferred to an isolated portion of the property and allowed to leak until empty. If a container holding waste carrying the P999 waste code is not in good condition or begins to leak, the Permittee shall follow Condition 3.D.28.

3.D.2. The Permittee shall assure that wastes or other materials in containers are compatible with the containers. Containers must be made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste stored in them, so that the ability of the containers to contain the waste is not impaired.

3.D.3. The Permittee shall not place incompatible waste or materials in the same container.

3.D.4. The Permittee shall not place hazardous waste or materials in an unwashed container that previously held an incompatible waste or material.

3.D.5. A container holding a waste that is incompatible with any waste or other material shall be separated from the other waste or material by placing it in building 68, 69-North, or 69-South as appropriate. No incompatible wastes shall be stored in the container management areas identified in Condition 3.A.2.a. through s., and u. through y. and cc. except under the limited circumstances outlined in Condition 3.C.4. Compressed gas cylinders shall be stored in racks in the cylinder storage area with compatible materials in each rack. Cylinder compatibility and rack separation shall be in accordance with the International Fire Code.

3.D.6. Containers shall always be closed except when the Permittee is adding or removing wastes or treatment reagents, as allowed by this permit, to or from the containers. Containers of waste identified by the P999 waste code must remain closed at all times while at the facility, but may have the retaining ring or other device securing the lid or cover to the container, loosened for safety reasons, as necessary, immediately prior to being fed to the incinerator. For overpacks identified by the P999 waste code, both the inner lid and outer lid may be loosened immediately prior to being fed to the incinerator.

3.D.7. Ventilation of open containers shall be conducted in accordance with Attachment 14. Use of the fume exhausters in buildings E-1 and E-5 during sampling or waste inspection is optional.

3.D.8. Containers shall not be opened, handled, stored, or managed in a manner which may rupture the containers or cause them to leak.

3.D.9. The Permittee shall unload any transport vehicle carrying containers within ten days of being received at the facility. Small containers shall be placed in the receiving and holding floor areas of buildings E-1 or E-5, bays 1-6 when in receiving mode, or in the temporary extensions of the receiving areas outlined in Attachment 8 until the material has been accepted. Bulk containers may be placed in the drive through direct burn station (tankers only), the drive through corrosive direct burn station (a tanker or a bulk liquid tote only), the truck unloading direct burn station (tankers only), the bulk solids/sludge pad, sludge pad direct burn station, or E-1, E-5, and E-4 receiving docks prior to acceptance. Compressed gas cylinders may be placed into the cylinder storage area prior to acceptance. Those cylinders in the cylinder storage area that are not yet accepted shall be clearly identified in a unique manner from those cylinders that have been accepted.

3.D.10. The Permittee shall maintain sufficient aisle space in the container management areas to allow the unobstructed movement of personnel, fire protection equipment, discharge control equipment, and decontamination equipment to all areas of the container management areas. Sufficient aisle space shall be maintained such that access can be made to each container to check for leaks, container damage or deterioration, and also to view the barcode label. Containers shall be placed, and aisle space maintained, as shown on drawings D-034-M-401, D-800-M-402, and D-800-M-403 in Attachment 10. For larger bulk containers (such as tankers or rolloffs) being stored on the bulk solids/sludge pad, one bulk container occupies the same space as one row of six pallets shown on drawing D-800-M-403. For bulk containers with a similar footprint as a pallet (such as a bulk liquid tote or Flo-bin), the bulk container occupies the same space as one pallet of drums. Bulk containers shall be stored in the same locations as the pallets or rows of pallets indicated on drawing D-800-M-403. For larger bulk containers (such as tankers or rolloffs) being stored in the E-1, E-5, and E-4 receiving docks, one bulk

container occupies the same space as two rows of five pallet locations shown on drawing D-800-M-402. For bulk containers with a similar footprint as a pallet (such as a bulk liquid tote or Flo-bin), the bulk container occupies the same space as one pallet of drums. For the truck unloading direction burn station, no containers on pallets shall be stored in a bay at the same time as a bulk container is being stored in the bay.

3.D.11. The Permittee shall not locate containers holding ignitable or reactive waste, including those which have not yet been accepted, within 50 feet of the facility's property line.

3.D.12. No smoking shall be allowed within 50 feet of any of the container management areas. The Permittee shall take precautions to prevent accidental ignition or reaction of waste. The waste shall be separated and protected from sources of ignition or reaction including, but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. Such sources of ignition shall be allowed only after adequate additional precautions have been taken to prevent ignition of wastes or other materials and a hot work permit has been issued. Notwithstanding this condition, a hot work permit is not required for performing storage and acceptance (fingerprint) analyses within the hoods of the E-5 fingerprint area.

3.D.13. The Permittee shall maintain a record of the location of each container in the container storage areas. A history of the movement of each container of waste will be maintained from the time it is placed into one of the container management areas until it is either incinerated or manifested off-site. The Permittee shall comply with the waste tracking provisions in Attachment 8. The Permittee shall provide access to the electronic waste tracking system portion of the operating record for the Director to review. This shall be accomplished by making available a remote link to the computer system and the appropriate query system for accessing the required data. Data to be accessible include manifest information, profile information, processing waste class code, final code dates for wastes that have been accepted or rejected, load sample analyses, weights, current locations, movement histories, and the dates/times incinerated or transferred off-site. Queries shall be provided to access the information for individual drums, manifests, EPA ID numbers, lot numbers, and profiles. It shall also provide the information for containers based on location at the facility, status (rejects, infectious wastes, etc.), and characteristics (ignitables, cyanides, sulfides, oxidizers, corrosives, reactives, etc.).

3.D.14. Several small containers which have been shrink-wrapped or otherwise bound together and attached to a pallet and shipped as a single container may be accepted

and managed at the facility as one container. If the containers on a pallet are not bound as described above, they must be managed as individual containers.

3.D.15. Containers, not including gas cylinders and bulk containers, shall be stored on pallets. Compressed gas cylinders are stored in racks as outlined below. Containers on pallets shall be stored on racks where available and as outlined below. Where racks are not available, containers may be stacked on pallets as outlined below. The containers shall be stacked neatly, wrapped, or both, to provide stability and in a manner that will not cause them to fall or leak.

a. For large containers (≥ 50 gallon capacity) the maximum stacking height per pallet is one container. For small containers (<50 gallon capacity), the maximum stacking height per pallet is 48 inches.

b. Containers shall not be stacked more than:
three pallets high in buildings E-2 (exclusive of the workstations and spaces 1 through 12 in row G), E-3 (exclusive of safes in spaces 4 and 5 in row F), E-4 (exclusive of the decant area and repack area), and E-7 (exclusive of row F, space 19);
two pallets high in building E-6 (exclusive of spaces 1 through 5 in row H), truck unloading direct burn, the refrigerated trailers parked in E-1, E-5, or E-4 receiving docks, the breezeway, spaces 1 through 12 in row G of building E-2, space 19 in row F of building E-7, bays 1-6 when in storage mode and buildings 68, 69-North and 69-South;
one pallet high in the receiving and holding areas of buildings E-1 and E-5, E-1, E-5, and E-4 receiving docks, bulk solids/sludge pad, laboratory cooler, bays 1-6 when in receiving mode, WS1-WS3, the decant area and repack area in building E-4, the safes in spaces 4 and 5 in row F of building E-3, spaces 1 through 5 in row H of building E-6, the drum pumping storage area, the drum pumping station, and the drive through direct burn station.

c. Containers placed or stacked on the feed conveyors need not be on pallets. If they are stacked, they must be stacked in such a way that they will not fall as they move on the conveyor. Stacking height is limited to 48 inches on the conveyors.

d. Containers that have been legally shipped but do not meet the height limitations specified in Condition 3.D.15.a. may be off-loaded and held in the receiving and holding floor areas of buildings E-1 or E-5 or in bays 1-6 when in receiving mode. However, they must be reconfigured to meet the size requirements prior to placement in any of the other container management areas.

e. Compressed gas cylinders shall be stored in racks containing compatible gases, with different types of gases separated in accordance with the International Fire Code. The cylinders shall be secured to prevent falling as described in IFC 30.

3.D.16. The Permittee shall prepare and maintain on site an infectious waste management plan that addresses the applicable requirements of Utah Admin. Code R315-316-2.

3.D.17. Except for sharps, infectious waste shall be contained in plastic bags or inside rigid containers. The bags shall be securely tied and the containers shall be securely sealed to prevent leakage or expulsion of solid or liquid wastes during storage and handling.

3.D.18. Infectious waste sharps shall be contained for storage, handling, and treatment in leak-proof, rigid, puncture-resistant containers which are taped closed or tightly lidded to preclude loss of contents.

3.D.19. All containers for containment of any infectious waste shall be red or orange, or if containers are not red or orange, shall be clearly identified with the international biohazard sign and one of the following labels: "INFECTIOUS WASTE," "BIOMEDICAL WASTE," or "BIOHAZARD."

3.D.20. A rigid infectious waste container may be reused for infectious or non-infectious waste if it is thoroughly washed and decontaminated each time it is emptied or if the surfaces of the container have been completely protected from contamination by disposable, unpunctured, or undamaged liners, bags or other devices that are removed with the infectious waste, and the surface of the liner has not been damaged or punctured.

3.D.21. Storage and containment areas must protect infectious waste from the elements, be ventilated to the outside, be only accessible to authorized persons, and be marked with prominent warning signs on, or adjacent to, the exterior doors or gates. The warning signs shall contain the international biohazard sign and shall state: "CAUTION - INFECTIOUS WASTE STORAGE AREA - UNAUTHORIZED PERSONS KEEP OUT" and must be easily read during daylight from a distance of 25 feet.

3.D.22. If infectious waste is on site longer than seven days, it shall be stored at or below 40 degrees Fahrenheit.

3.D.23. Infectious waste shall be incinerated as soon as possible, but not to exceed 60 days after collection from the generator.

3.D.24. Building E-7 shall have a minimum of five air changes per hour.

3.D.25. The LEL monitor in building E-7 shall alarm at 10% LEL.

3.D.26. Storage of flammable liquids in building E-7 shall be limited to metal containers.

3.D.27. The Permittee shall maintain the foam-water fire protection system to each of the E-6 and E-7 container storage buildings.

3.D.28. If a container holding waste identified by the P999 waste code is not in good condition (e.g., it exhibits severe rusting, bulging, apparent structural defects) or it begins to leak, the Permittee shall immediately secure the area around the container and prohibit access to the area. The Permittee shall immediately notify the generator of the waste and request the generator's assistance in responding to the situation. Access to the container in question shall be prohibited until the generator advises the Permittee on proper management of the situation. Only after the generator has advised the Permittee and recommended that the Permittee respond, may the Permittee approach the container and conduct the necessary response/cleanup activities. The Permittee shall comply with Condition 3.D.1., using the generator if necessary to contain, collect and repackage the waste. The Permittee shall also orally notify the Director within 24 hours of discovering the problem/leak. These notifications, the generator's advice and all cleanup and response shall be documented in the facility operating record.

3.D.29. Prior to using the bulk solids/sludge pad, truck unloading direct burn station, and the E-1, E-5, or E-4 receiving docks for the storage of large containers holding bulk materials or for the storage of containers on pallets, the storage area(s) shall be delineated by marking the concrete with durable paint where the containers/pallets of containers are to be stored.

3.D.30. When the bulk solids/sludge pad is being used to store waste, it shall be protected with physical barriers sufficient to prevent vehicular damage to containers in the storage areas. The Permittee shall also operate the bulk solids/sludge pad in a manner that permits access to, and the movement of personnel, fire protection equipment, discharge control equipment, and decontamination equipment to all areas of the container storage pad while also allowing the necessary access to adjacent waste management units.

3.E. CONTAINMENT

3.E.1. The secondary containment systems shall be operated and maintained so that they are free of both cracks and gaps and are sufficiently impervious to contain leaks,

spills, and accumulated precipitation until the collected material is detected and removed.

3.E.2. The Permittee shall empty all liquid and remove accumulated waste from a sump or secondary containment area no later than 24 hours after discovering the contents. All liquids and other materials collected from a sump or secondary containment area shall be considered a hazardous waste and shall be managed appropriately.

3.E.3. Containment for 10% of the maximum capacity volume of containers or the volume of the largest container, whichever is greater, shall be maintained for each container management area identified in Condition 3.A.2., with the exception of the cylinder storage area and cylinder feed station, which require no secondary containment.

3.E.4. The Permittee shall maintain the system for diverting liquid run-on around the direct burn pad in good repair so that run-on to the pad is prevented.

3.E.5. The Permittee shall maintain the secondary containment system for the direct burn vessel feed area so that any liquid will drain from the direct burn pad to sump SP-624 without puddling.

3.F. DIRECT BURN VESSELS

3.F.1. The Permittee is authorized to use up to four direct burn vessels, subject to the requirements of this module. Each direct burn vessel shall be marked with a unique identifying number and shall be tracked in accordance with Attachment 8.

3.F.2. All direct burn vessels shall be stored only in the permitted container management areas specified in Condition 3.A.2.

3.F.3. The Permittee shall maintain and operate the direct burn vessels in accordance with the drawings and procedures contained in Attachments 10 and 8.

3.F.4. Modifications to the drawings and operations for the direct burn vessels shall be allowed only in accordance with the permit modification requirements in Condition 1.D.

3.F.5. All direct burn vessels shall be nitrogen blanketed.

3.F.6. All direct burn vessels shall have emergency pressure relief valves that shall be vented to atmosphere.

3.F.7. All direct burn vessels shall be equipped with an anti-static inlet.

3.F.8. The Permittee shall empty and visually inspect each direct burn vessel for the general condition of the vessel and measure the corrosion of each direct burn vessel at least once each year and certify that it can safely store hazardous waste. The certification shall document that the structural support, seams, connections, and pressure controls for each vessel have been adequately designed and that the vessel has sufficient structural strength and compatibility with the waste to be stored to ensure that it will not collapse, rupture, or fail. This certification must be made by an independent, qualified Utah registered professional engineer.

3.F.9. The Permittee shall not overfill any of the direct burn vessels.

3.F.10. The direct burn vessels shall always be closed except when the Permittee is adding or removing wastes, as allowed by this permit, to or from the vessels.

3.G. DIRECT BURN TANKERS (DRIVE THROUGH DIRECT BURN STATION SLUDGE PAD DIRECT BURN STATION, AND TRUCK UNLOADING DIRECT BURN STATION)

3.G.1. Tankers of waste to be fed through the drive through direct burn system and containers to be decanted to a tanker shall be parked or placed within the drive through direct burn station secondary containment (eastern half of the former loadout area south of the slag pad). Tankers of waste to be fed from the truck unloading direct burn system shall be parked in the east bay of the truck unloading building. See drawing D-034-M-002.

Tankers of waste to be fed through the , sludge pad direct burn station system shall be parked or placed within the bulk solids/sludge pad and sludge pad direct burn station secondary containment (south of the bulk solids tower). See drawing D-034-M-002

3.G.2. Wastes stored in either direct burn tanker station (drive through, sludge pad direct burn station, or truck unloading) or fed from either tanker to the kiln shall be tracked in accordance with Attachment 8.

3.G.3 The Permittee shall maintain and operate the drive through, sludge pad direct burn station, and truck unloading direct burn tanker systems in accordance with Attachments 8 and 10.

3.G.4. Modifications to the operation of the drive through, sludge pad, -and truck unloading direct burn tanker systems shall be in accordance with Condition 1.D.

3.G.5. The drive through, sludge pad, and truck unloading direct burn tankers shall be nitrogen blanketed.

3.G.6. The drive through, sludge pad, and truck unloading direct burn tankers shall be grounded prior to and while being fed, filled, or both.

3.G.7. The Permittee shall comply with 40 CFR 266.111(d)(2) as incorporated by reference into Utah Admin. Code R315-14-7. The certification by the local Fire Marshall shall be obtained prior to the drive through, sludge pad, and truck unloading direct burn tanker systems being placed into operation.

3.G.8. As viewed from an area between the afterburner and front wall of the kiln, the Permittee shall maintain clear visibility of the direct burn tanker, sludge pad, and the manifold/pump area of the drive through direct burn station at all times waste is present in the unit. The Permittee shall maintain a view of the direct burn tanker and the manifold/pump area of the truck unloading direct burn station through a video camera connected to a monitor in the control room at all times waste is present in the unit. An operator shall be present at the decant area whenever decant operations are occurring in the drive through direct burn station.

3.G.9. Wastes from either the drive through direct burn system, sludge pad direct burn station system, or the truck unloading direct burn system may be fed to either the sludge lance (A-103) or to the direct burn lance (A-101). While feeding wastes from either the drive through direct burn system, sludge pad direct burn station system, or the truck unloading direct burn system to the sludge lance (A-103), the lines shall be isolated from the sludge recirculation line to prevent ignitable or incompatible wastes from entering either of the sludge storage tanks (T-401 or T-406). Following the feeding of wastes from either the drive through direct burn system or the truck unloading direct burn system to the sludge lance (A-103), the lines shall be adequately flushed with an appropriate solvent to prevent ignitable or incompatible wastes from entering either of the sludge storage tanks (T-401 or T-406).

3.G.10. When using the vacuum pump to decant from a container to a direct burn tanker, the vacuum pump shall automatically shut down and decant operations cease when the LEL measurement of the combined dilution air and vacuum pump vent reach 60% LEL.

3.G.11. When the backup carbon adsorption system is being used, no vacuum pump transfer of waste from a container to a tanker is allowed.

3.H. DIRECT BURN FROM A CONTAINER

3.H.1. Containers of waste to be fed through the drum pumping station shall be placed inside the glove box at the drum pumping station. See drawing D-034-M-002. The glove box will be sealed and vented prior to opening the drums or feeding to the kiln when processing flammable liquids, oxidizers, toxic and highly toxic materials.

3.H.2. Wastes processed through the drum pumping station shall be tracked in accordance with Attachment 8.

3.H.3. The Permittee shall maintain and operate the drum pumping station in accordance with Attachments 8 and 10.

3.H.4. Modifications to the operation of the drum pumping station shall be in accordance with Condition 1.D.

3.H.5. All containers holding flammable liquids at the drum pumping station shall be grounded prior to and while the waste is being fed to the kiln from the drum pumping station. The glove box and feed system shall also be grounded according to supplier recommended practice.

3.H.6. The Permittee shall comply with 40 CFR 266.111(d)(2) as incorporated by reference into Utah Admin. Code R315-14-7. The certification by the local Fire Marshall shall be obtained prior to the drum pumping station being placed into operation.

3.H.7. The drum pumping feed station feed system shall be flushed with an appropriate fluid prior to feeding an incompatible waste so that reactions will not occur in the feed system.

3.H.8. Nitrogen blanketing will be used as needed to prevent explosive atmospheres from developing in the glove box and piping system.

3.H.9. The glove box shall be vented to the afterburner. In the event that air to the eductor fails, it shall automatically switch to nitrogen to continue venting the glove box.

3.H.10. The glove box shall be equipped with a fire detection system and a CO_2 fire suppression system. This system shall be maintained to immediately extinguish any fire in the glove box.

3.H.11. The glove box shall be equipped with an LEL sensor and alarms to provide warnings prior to the development of potentially explosive situations. The Permittee shall use these alarms and take appropriate corrective actions to prevent fires and explosions.

3.H.12. The glove box shall be equipped with explosion panels designed to protect workers in the area.

3.H.13. Prior to using the drum pumping station storage area, the storage area shall be delineated by marking the concrete with durable paint where the pallets of drums are to be stored.

3.H.14. When the drum pumping station storage area is in use, it shall be protected with physical barriers sufficient to prevent vehicular damage to containers in the area. It shall also be maintained clear of equipment, containers, debris, or other objects such that access to, and the movement of personnel, fire protection equipment, discharge control equipment, and decontamination equipment to all areas of the container storage area will not be impeded.

3.I. CORROSIVE DIRECT BURN TANKERS AND TOTES (DRIVE THROUGH CORROSIVE DIRECT BURN STATION)

3.I.1. Tankers or bulk liquid totes of waste to be fed through the drive through corrosive direct burn system shall be parked or placed within the drive through corrosive direct burn station secondary containment (western half of the former loadout area south of the slag pad). See drawing D-034-M-002.

3.I.2. Wastes stored in or fed from the drive through corrosive direct burn station shall be tracked in accordance with Attachment 8.

3.I.3. The Permittee shall maintain and operate the drive through corrosive direct burn tanker system in accordance with Attachments 8 and 10.

3.I.4. Modifications to the operation of the drive through corrosive direct burn tanker system shall be in accordance with Condition I.D.

3.I.5 All tankers and bulk liquid totes in the drive through corrosive direct burn station shall be nitrogen blanketed.

3.I.6. All tankers and bulk liquid totes in the drive through corrosive direct burn station shall be grounded while being fed to the incinerator.

3.I.7. The Permittee shall comply with 40 CFR 266.111(d)(2) as incorporated by reference into Utah Admin. Code R315-14-7. The certification by the local Fire Marshall shall be obtained prior to the drive through corrosive direct burn tanker system being placed into operation.

3.I.8. The Permittee shall maintain a view of the corrosive direct burn tanker or tote and the manifold/pump area of the drive through corrosive direct burn station through a video camera connected to a monitor in the control room at all times waste is present in the unit.

3.I.9. Wastes from the drive through corrosive direct burn system may only be fed to the south afterburner burner location A-106B-5.

ATTACHMENT 8

WASTE STORAGE, PROCESSING, AND TRACKING

Attachment 8
Waste Storage, Processing, and Tracking

Table of Contents

1.0 Introduction 1
1.1 Transfer Operations 1
1.2 Rejected Wastes 1
2.0 Waste Receipt and Acceptance 2
2.1 Pre-transport Requirements 2
2.2 Vehicle Check-in and Routing 2
2.3 Acceptance and Sampling 3
2.3.1 Vans and Flat Beds 3
2.3.2 Bulk Solids, Sludges, Liquids 3
2.4 Check-out Procedure 5
3.0 Waste Storage 5
3.1 Containers 5
3.2 Bulk Solids, Sludges, and Liquids 8
3.3 Empty Containers 9
3.4 Site-generated Wastes 10
3.5 Off-site Shipments 10
3.6 Containment Systems 10
4.0 Waste Processing 13
4.1 Decanting 14
4.2 Repack Operations 15
4.2.1 Description of Processing Activities 15
4.2.2 General Operating Procedures 17
4.3 Shredding 17
4.4 Bulk Waste Mixing and Blending 18
4.4.1 Isocyanate Waste Bulking 19
4.5 Direct Burn 19
4.5.1 Direct Burn Vessels 19
4.5.2 Direct Burn Tankers (Drive Through/Truck Unloading/Sludge Pad) 20
4.5.3 Direct Burn Liquid Feed System From a Tanker or Direct Burn Vessel 20
4.5.4 Direct Burn Sludge Feed System 20
4.5.5 Direct Burn Compressed Gas Cylinder Feed System 21
4.5.6 Direct Burn From a Container 21
4.5.7 Direct Burn Corrosive Feed System 22
5.0 Waste Tracking 23
5.1 Introduction 23
5.2 Container Tracking (Excluding Cylinders and Direct Burn Tankers) 23
5.2.1 Barcode/Green Acceptance Label or Mark Exemption 25
5.2.2 Lost Containers (DWB) 25
5.3 Decant Tracking 27

5.4 Repack Tracking 27
5.5 Shredding Tracking 27
5.6 Direct Burn Tracking 27
5.7 Container Bulk-up Tracking 28
5.8 Bulk Solids, Liquids, and Sludge Tracking 28
5.9 Compressed Gas Cylinder Tracking 29
5.10 Drum Pumping Station 29
6.0 Emissions of Organic Vapors from Equipment Leaks 30
6.1 Equipment Tagging and Marking 30
6.2 Inspecting and Monitoring the Equipment 30
6.3 Repairing and Reporting Equipment Leaks 32
6.4 Record keeping 32

1.0 Introduction

This Attachment outlines specific requirements for the management of wastes prior to incineration at the Clean Harbors Aragonite facility. It discusses available management options and specifies requirements for storing, managing, processing, and tracking wastes in containers and in bulk.

This Attachment addresses the management of wastes accepted at the facility. However, there are two situations where wastes that have not been accepted are managed at the facility. These are transfer operations and rejected wastes. Management of these wastes is discussed in Sections 1.1 and 1.2 below. The management of site-generated waste is discussed in Section 3.4.

1.1 Transfer Operations

After off-loading, Clean Harbors Aragonite may temporarily (ten days or less) hold wastes manifested to another facility similarly to what is allowed in Utah Admin. Code R315-6-1.12. This will be referred to as transfer operations. These containers will not be subject to the requirements for barcodes/green acceptance labels or marks, but they will be clearly marked/labeled as transfer wastes. They may only be held in E-1, E-5, or in bays 1-6. If transfer wastes are held in one or more bays, accepted and transfer wastes will not be placed in the same row and wastes will be segregated according to compatibility. The date that they are placed into the holding area will be clearly documented in the operating record.

1.2 Rejected Wastes

Occasionally, a generator will ship waste to Aragonite for treatment that for a variety of reasons will not be accepted. These are referred to as "rejected wastes." The procedures below will be used to ensure that these wastes will be managed properly while on site and shipped off site expeditiously.

There are three scenarios that may occur where rejected waste may need to remain on site for a short period of time. The first scenario is where waste arrives that Aragonite cannot or does not want to manage. The second scenario is for scheduled containers that initially appear to match the manifest. However, based on fingerprint analyses, LDR form inspection, etc., Aragonite may discover that it cannot or does not want to manage some of the waste that is received. The third scenario is when containers arrive that are not identified on the manifest. These will be considered to be rejected waste while the discrepancy is investigated. These containers may be held at the facility for a short time before resolving the issue and accepting them or shipping them off site.

Under all of these scenarios, the container would receive a barcode during the receiving process. The barcode would appear similar to other Aragonite barcodes. In the waste tracking system, the processing waste class code will be set to "RTAF", "RTG", or "RTGI" and the date the reject determination was made shall be noted in the comments section of the waste tracking system. Containers in reject status will be identified on the *Drum Reject Report*.

The location of all rejected waste will be tracked in the computerized waste tracking system similar to all other wastes while on site. The waste tracking system will clearly show that the material is rejected waste and when this determination was made. All containers of rejected waste will be barcoded to facilitate tracking and will also be clearly labeled as rejected near the barcode on the container.

Rejected containers, except gas cylinders, may be temporarily placed in the "K" or "M" rows of building E-1 or in any of the bays to await shipment off-site. Arrangements will be made to ship the material to another TSD or to return it to the generator. Rejected wastes will not remain on-site for longer than 60 days, unless an extension has been granted by the Director. When a rejected container is shipped off site, the tracking activity code will be updated to "RTAF", "RTG", or "RTGI" and the actual date will be set to the date the container leaves the facility. Containers that have been rejected and shipped off-site will also be identified on the *Drum Reject Report*.

If Aragonite decides to accept a container of waste that was initially rejected (e.g., an extra drum that arrived on a load) that determination will be made within 60 days of receipt of the container (PREC date). These containers will also be identified in the waste tracking system such that they are captured by the *Drum Reject Report*. The final date code will be the date they were accepted. The date that they were initially rejected will be preserved in the comments section in waste tracking.

Rejected compressed gas cylinders may be temporarily placed in the cylinder storage area to await shipment off site.

2.0 Waste Receipt and Acceptance

2.1 Pre-transport Requirements

All generators must prepare all shipments in accordance with §262.20-23, (Subpart B-the Manifest), §262.30-33 (Subpart C-Pre-transport Requirements), State of Utah regulations, and the Clean Harbors Aragonite guidelines for waste acceptance and receiving. All containers must meet HM-181, Department of Transportation Performance Oriented Packaging (DOT acceptable containers).

2.2 Vehicle Check-in and Routing

All trucks arriving at the Clean Harbors Aragonite, facility must stop and their drivers check in at the front desk. Drivers present the manifest(s) to the guard, who performs a visual inspection of the manifest and vehicle. For bulk shipments, the driver is directed to the scale and the incoming weight is recorded on the weigh ticket. Material shipping in vans or flat beds will be weighed by the container, not the load. The truck is then directed to the proper unloading/sampling area or drop area. Trucks with frozen waste may also be placed in the thaw shed to thaw.

2.3 Acceptance and Sampling

Waste is received from Clean Harbors Aragonite approved transporters in vans, flat-bed trailers, bulk solid trucks (end-dumps, dump trucks, and roll-offs), and bulk liquid tankers.

2.3.1 Vans and Flat Beds

Vans proceed to one of the container building unloading docks and unloading begins. Clean Harbors Aragonite personnel remove the containers from the vehicle to the scale station and record the weight on each container. Alternately, if a load of containers comes from a Clean Harbors facility where the containers were weighed previously (e.g., a hub or transfer facility), the Permittee may use Procedure #REC1003 instead of weighing each container at the facility. The appropriate containers will be moved to the sampling area. Containers are only opened for visual inspection and sampling in the receiving and holding floor areas of buildings E-1 and E-5 and in bays 1 through 6 when in receiving mode. Compressed gas cylinders will be placed on racks for transport and storage in the cylinder storage area. If the van cannot be unloaded immediately, it may be directed to one of the drop areas (east of the container storage buildings or along the fence east of the container storage buildings -- another location south of main street may be used on a temporary basis only after receiving oral approval from DSHW) until an unloading dock is available.

Flat-bed trailers and vans are used for transporting large items such as transformers, and frequently carry smaller DOT acceptable containers intermixed with the load. These containers are off-loaded and checked through the same system as described above. However, very heavy or very tall items such as large transformers and flow bins containing catalyst may require unloading in an area not restricted by the height of the doorway or the size of forklift that is being used, such as the bulk solids pad.

The receivers verify container count and also verify the integrity of the containers. Manifest discrepancies (count) are reported to the appropriate personnel. Sampling is done per the Waste Analysis Plan. Sampling and analysis results are used to determine the appropriate management process(es) for the material. Aragonite barcodes are placed on the containers during this receiving process. Once it has been determined that the waste will be accepted, a green acceptance label or mark will be placed on the Aragonite barcode. After the waste has been accepted, the containers may be moved from the receiving and holding areas to the storage or processing areas. Compressed gas cylinders may be moved to the compressed gas storage area prior to acceptance. They will not remain in the receiving building for more than 24 hours. All discrepancies will be resolved with the generator prior to accepting the containers. Written documentation of these discussions and resolutions will be clearly noted in the document packet for each manifest.

2.3.2 Bulk Solids, Sludges, Liquids

Bulk solids containers (end-dumps, dump trucks, and roll-offs) must be covered. Tarps or lids are acceptable container covers if the tarps or lids are visually free of cracks, holes, gaps, or other open spaces. Tarps or lids may be removed for sampling or removing waste but must be closed upon completion of the activity or leaving the vicinity of the container. Any bulk solids

container that will not be off-loaded within 24 hours of receipt must be visually inspected for visible cracks, holes in tarps, gaps, or other open space into the interior of the container. Efforts must be made to repair any defect found within 24 hours after detection. The repair must be complete within five days after detection or the waste must be removed from the container. The container cannot be used to manage waste until the repair is complete.

The opening device or dome on tankers may be opened for sampling, visual inspection of the contents, or washout, but must be closed upon completion of the activity or leaving the vicinity of the container. Any tanker that cannot be off-loaded within 24 hours of receipt must be visually inspected for proper closure of all hatches and valves.

Trucks containing bulk wastes proceed to one of the unloading areas (bermed area east of the bulk solids building for bulk solids and sludges, the bulk liquids unloading building for bulk liquids, the drive through direct burn station, the sludge pad direct burn station, the drive through corrosive direct burn station, or the truck unloading direct burn station for tankers to be fed directly to the kiln/afterburner), or the sampling platform between the control room and the utility building where sampling is done per the Waste Analysis Plan. During inclement weather sampling may be done in the bulk liquids unloading building (E-14) or the thaw shed. If the truck cannot be unloaded immediately, it may be directed to the drop area (along the fence east of the bulk solids building for bulk solids and sludges, or northwest of the bulk liquids unloading building for bulk liquids – another location south of main street may be used on a temporary basis only after receiving oral approval from DSHW) until an unloading area is available. No unloading can commence until the necessary laboratory analyses are complete and the necessary waste tracking requirements are met.

Sampling and analysis results are used to determine the appropriate management process(es) for the material. Once it has been determined that the waste will be accepted, the waste is accepted by off-loading it to a receiving/storage tank, by placing the tanker in the drive through direct burn station (if not already located there) and transferring the material to tank T-411 in the waste tracking system, placing the tanker in the drive through corrosive direct burn station (if not already located there) and transferring the material to tank T-415 in the waste tracking system, placing the tanker in the truck unloading direct burn station (if not already located there) and transferring the material to tank T-413 or T-414 in the waste tracking system, or by placing (if not already located there), placing the tanker in the sludge pad direct burn station (if not already located there) and transferring the material to tank T-412 in the waste tracking system, the tanker or bulk container on the bulk solids/sludge pad or E-1, E-5, or E-4 receiving docks and by placing a green label or mark on the barcode indicating that the waste has been accepted. Prior to and during the unloading of bulk liquids, personnel visually check to ensure all valves are in the appropriate position, transfer lines are secured and the drip pans or absorbent pads are under the connections. A check is made to ensure that compatibility and other waste acceptance analyses are complete prior to commencing the transfer. Clean Harbors Aragonite personnel remain on-the-job while waste is removed from the transport vehicle and until all transfer lines have been disconnected.

In order to reduce demurrage costs, Clean Harbors Aragonite may transfer direct burn bulk waste from a customer tanker to a site tanker. The tanker-to-tanker transfer is performed in the truck unloading building, E-14, much like a tanker to tank transfer. The receiving tanker is DOT certified for integrity and roadworthiness annually and is subject to all permit requirements for direct burn feeding.

The appropriate Clean Harbors Aragonite personnel visually inspect bulk solid waste material during the off-loading to a bulk solids tank. Should the employee see any abnormal or non-conforming material, off-loading stops until the situation is rectified.

Each document packet will contain records indicating that each waste has been accepted or rejected, initialed and dated by the appropriate waste acceptance personnel.

2.4 Check-out Procedure

Once the transport vehicle is empty, it is directed to the scales for weigh-out. The transporter receives a copy of the weigh ticket and the signed manifest. Clean Harbors Aragonite personnel will note if the actual weight deviates by more than 10% of the manifested weight, constituting a manifest discrepancy (bulk loads only). If this occurs, the appropriate personnel will be informed and will commence discussions with the generator. Written documentation of these discussions and resolutions will be clearly noted in the document packet for each manifest.

3.0 Waste Storage

3.1 Containers

This section details the processes that will be used to store waste in containers at the facility.

The east storage building contains a receiving area (building E-5 floor area), three bays for receiving or waste storage depending on the operating mode (bays 1, 2, and 6), and two special waste storage areas (building E-6 and E-7), which are for liquids that are classified as "ignitable" or have a flash point of less than 140 °F. The west storage building has a receiving area (building E-1 floor area), three bays for receiving/waste storage or staging for outbound shipping depending on the operating mode (bays 3, 4, and 5), and two general storage areas (buildings E-2 and E-3). Three workstations are located in building E-2 which are used for processing containers of waste and building E-3 has two safes for storage of DEA materials. Buildings 68 and 69-North/South, located east of container storage building E-2, are separate storage areas exclusively for incompatibles. The container processing area (building E-4) contains the decant room and the repack area. The decant inventory area in the E-4 building may also be used for sampling in conjunction with compatibility testing for liquids. Building E-4 and the breezeway (covered, bermed area between building E-4 and the kiln front wall) are used for staging containers for feed to the kiln, repack area, decant area, bulk solids tanks, small sludge tank, and/or shredder. The direct burn pad is used to hold a direct burn vessel while its contents are being fed to the kiln. The drive through direct burn station, the sludge pad direct burn station, the drive through corrosive direct burn station, and the truck unloading direct burn station are

used to hold tankers while their contents are being fed to the kiln/afterburner. The drive through corrosive direct burn station may also be used to hold bulk liquid totes while their contents are being fed to the afterburner. The truck unloading direct burn station may also be used to store smaller containers on pallets. The bulk solids/sludge pad may be used to store tankers, bulk containers, and smaller containers on pallets. The drive through direct burn station is also used to hold containers of waste while their contents are being decanted to a tanker. The drum pumping storage area is used to stage containers for processing through the drum pumping station, with the drum pumping station being the area where containers are held while their contents are fed to the kiln. The E-1, E-5, and E-4 receiving docks may be used to store bulk containers, containers on pallets and containers in refrigerated trailers. These areas are shown on drawings D-800-M-402 and D-800-M-403 in Attachment 10. Containers of waste may also be stored in the lab cooler. Compressed gas cylinders are stored in the cylinder storage area west of Center Street and north of 2nd South Street as indicated on Drawings D-034-M-002 and D-034-M-401 and at the cylinder feed station indicated on D-034-M-002.

The current operating mode (receiving or storage) of bays 1 through 6 will be maintained in the operating record and prominently displayed in buildings E-1 and E-5 at all times.

Material waste profiles, sample results, and ultimate destinations provide the basis for determining where each container is stored and what is done to prepare the material for incineration or transfer.

The waste types commonly stored in the general storage area consist of liquids, dirt and debris from spills, capacitors awaiting shredding, transformers awaiting draining and flushing, solids awaiting incineration or transfer to off-site facilities, and empty containers that will be either incinerated, reused, crushed and disposed off site, or recycled.

Dioxin-contaminated wastes will be stored similarly to all RCRA wastes. Handling instructions will be based on the characteristics, special instructions provided on waste profile sheets, and lab results for compatibility.

Clean Harbors Aragonite may accept infectious wastes provided the generator packages them in appropriate containers meeting DOT packaging requirements. These containers are packaged so as to prevent leakage or rupture during transport to the site. If possible, scheduling of any infectious waste will coincide with immediate feed to the kiln. The containers will be fed via the elevator and ram feeder. In the event these wastes cannot be incinerated within seven days of receipt at the facility, they will be shipped off
site or will be stored in a permitted storage area that will be maintained at or below 40 °F and fed as soon as possible so that storage will be minimized.

Containers stored at the facility will be DOT acceptable containers with the following exceptions:

- containers of waste generated on-site need not be DOT acceptable but must be in good condition and must be covered or must have a drum liner which is kept closed. They must also be made of appropriate materials of construction and be sturdy enough to be safely transported inside the buildings and throughout the facility.

- in the event that a generator does not use DOT acceptable containers to ship its wastes, the containers can only be stored if they are in good condition, covered or sealed, and sturdy enough to be safely transported inside the buildings and throughout the facility.

Roll-off bins, used for bulk solids, will not be stored in the building but will be placed into other permitted storage, emptied into a bulk solids tank or transferred to an EPA approved hazardous waste landfill. "Super Sack" type bags or boxes or other similar DOT bulk containers may be used to store contaminated soil or other dry debris in the container management areas.

All containers, regardless of size, must be visually inspected within 24 hours of receipt and every 12 months thereafter. Visual inspection includes checking the container and its cover and closure devices for cracks, holes, gaps, or other open spaces into the interior of the container. Any defects must be corrected within 24 hours of detection.

Any container that is larger than 119 gallons and is not a DOT acceptable container must be tested in accordance with EPA Method 21 and §265.1084(d) for organic emissions if it contains hazardous waste in light material service. If the monitoring shows the emissions to be greater than 500 ppm, the container must be repacked or processed within five days. Containers that have been demonstrated, within the preceding 12 months, to be vapor-tight, as specified by §264.1086(h), are exempt from these requirements.

Containers are inspected for leaks prior to pallet pickup. Should any container, except cylinders, leak, the contents are transferred to a new container or the container is placed into an overpack. Should transfer of the waste to another container be necessary because of poor condition of the container, it is normally conducted in the decant room or repack room in building E-4 or one of the workstations in building E-2. However, if moving it may cause it to leak or otherwise deteriorate, it may be transferred at its current location. If a leaking container is to be overpacked, any leakage is corrected by overpacking the container before it is moved. Compressed gas cylinders that are determined to be leaking will be transferred to the glove box at the cylinder feed station and the cylinder contents vented to the incinerator. If the incinerator is down when a cylinder is leaking, the cylinder will be transferred to a remote area of the facility and allowed to leak until empty.

If the spilled material flows into a sump, Clean Harbors Aragonite employees will follow the spill containment procedures and immobilize the spilled material using absorbents and neutralizing chemicals (if recommended). Sumps are kept clean and free of chemical spillage in order to minimize the danger of an incompatible reaction occurring in the sump.

If the spilled material splashes against containers of an incompatible waste material, the containers will be moved into a safe area and cleaned of all chemical residue. The floor/pad area will be decontaminated in accordance with emergency spill containment procedures.

All containers are marked and labeled with the appropriate RCRA/TSCA hazardous waste labels prior to storage in the container storage area.

Containers are transported from the dock to the assigned row and space. Forklifts are used to move the palletized containers within the container management areas.

Compressed gas cylinders are transferred into racks in the receiving buildings upon receipt and transferred to the cylinder storage area for storage. Only compatible cylinders are stored in a given rack and racks holding incompatible cylinders are stored in separated areas of the cylinder storage area. Determination of compatibility and storage separation distances are in accordance with the International Fire Code.

3.2 Bulk Solids, Sludges, and Liquids

Bulk wastes accepted at the facility are either liquids, solids, or sludges. This section outlines the management of bulk wastes at the facility.

The blend liquid tanks and the aqueous liquids tanks are to be operated in accordance with the process flow diagrams D-034-PF-301 sheets 1 and 2. Bulk liquids are off-loaded at the bulk liquids unloading building, E-14. After assuring that the material is compatible with the material already in the tank, it is pumped to a liquids tank (T-301 through T-312 or T-321 through T-324). Blended liquids may be pumped from tanks T-301 through T-306, T-309, T-310, and T-321 through T-324 for feed to the incinerator burners. Material from different tanks may be commingled to obtain a more uniform blend and to obtain the desired feed chemistries and characteristics. The source of blend feed to the burners may come from up to two sources (i.e., two tanks) at one time. The aqueous waste feed comes from tanks T-307, T-308, T-311, or T-312. There are occasions when material must be removed from the tanks, and it is not moved to another tank in the tank farm or fed to the incinerator (e.g., tank cleanouts for inspections or maintenance, removal of material that may be plugging the tanks, etc.). In these instances, the material may be placed into containers or into a tanker. The containers will be barcoded and placed into permitted storage. The tanker will be placed in the drive through direct burn station, the drive through corrosive direct burn station the sludge pad direct burn station, the truck unloading direct burn station, the bulk solids/sludge pad, E-1, E-5 or E-4 receiving docks, or will be off-loaded within 24 hours by pumping the material into a liquids tank or to the sludge tank system. Any residues in the tanker may be flushed into drums or the bulk solids tanks system.

There may be times where, due to safety or compliance concerns, or for other reasons, bulk liquids will not or cannot be stored in a tank. In these situations, the tanker truck may be placed in either the drive through direct burn station, the sludge pad direct burn station, or the truck unloading direct burn station and the material fed directly to the direct burn lance, A-101.

Alternately, a tanker or bulk liquid tote may be placed in the drive through corrosive direct burn station and the material fed directly to the afterburner through lance A-106B-5.

Fuel oil trucks are unloaded adjacent to the fuel oil storage tank using a truck pump or from truck unloading. Tank T-305 may be used as a fuel tank after it has been decontaminated from hazardous waste/PCB use. The tank is equipped with separate inlets for waste and fuel and outlets to the waste feed header and fuel oil header. If the tank system is used for waste, connections to the fuel oil system are blanked off and waste connections are blanked off when the tank is utilized for fuel.

Liquid material that is too viscous or otherwise unsuitable for management in the liquid tank farm is put in the sludge system. Normally it is off-loaded to the small sludge tank (T-406) from a tanker parked in the bermed area directly east of the tank. However, sludge can also be off-loaded directly to the large sludge tank (T-401). Sludge that is received in drums can also be poured from the drums into the small sludge tank. Sludge may be transferred between either of the two sludge tanks. A recirculation line to near the front wall provides a source of sludge feed to the incinerator. Part of the recirculating sludge is drawn off through a mass flow meter to the kiln front wall sludge lance (A-103). Similar to bulk liquids, there may be times where, due to safety or compliance concerns, or for other reasons, sludges will not or cannot be stored in a tank. In these situations, the tanker truck may be placed in either the drive through direct burn station, sludge pad direct burn stationor the truck unloading direct burn station and the material fed directly to the sludge lance, A-103.

Bulk solids material is off-loaded into permitted container storage on the bulk solids/sludge pad, E-1, E-5, or E-4 receiving docks, or emptied into either the small bulk solids tanks or the large bulk solids tank. Material from small containers or the entire container with its contents may also be placed in the tanks. These may be dumped through one of the large roll up doors on the east side of the building. Material may be processed from any of these tanks through the shredder to make a more manageable, uniform, and homogenous feed. Drums from the breezeway may also be fed directly to the shredder. The discharge of the shredder is into tank T-404B-West. Material from the tanks is moved to the other tanks, to the shredder, or to the apron feeder feed hopper by means of a clamshell.

3.3 Empty Containers

Empty containers are managed by incineration, recycling, off-site disposal and reuse.

Empty containers requiring incineration are staged in the container processing room for possible shredding and subsequent incineration.

Acceptable containers that are in good condition and empty as defined in Utah Admin. Code R315-2-7 are set aside. They are staged and may be sent off site to a recycler.

Empty containers may be managed by shipping them off site for disposal at an approved facility.

The facility may select empty containers for reuse by Clean Harbors Aragonite for purposes such as repacking. The technician inspects these containers and ensures that they are empty. Empty containers are placed in the container processing, general storage, and receiving areas.

Empty compressed gas cylinders are returned to the customer or de-valved and shipped off site to a landfill or recycler.

3.4 Site-generated Wastes

Clean Harbors Aragonite is a generator of incineration waste residue (slag, spray dryer and baghouse catch) that will be reburned or manifested off site to an EPA-approved disposal facility. The residue holding areas exist to handle the incinerator residue prior to reburning or off-site shipment. These areas are located east and west of the liquid tank farm, and south of the incineration system. Clean Harbors Aragonite is also a generator of other site-generated waste (e.g. spill cleanups, PPE, etc.). These wastes will be processed on-site or shipped off site similar to other wastes at the facility. All waste that has been accepted by Clean Harbors Aragonite or generated on-siteand that must be shipped off site is manifested off site with Clean Harbors Aragonite as the generator. An addendum will accompany each shipment identifying waste codes, waste quantities, and land disposal restrictions.

Roll-offs or other DOT acceptable containers will be used to accumulate incinerator slag and baghouse/spray dryer residue. These containers are suitable for transportation to an approved disposal facility. The slag and residue containers are designed to be reusable. For these and other site-generated wastes, the requirements of Utah Admin. Code R315-5 shall apply.

3.5 Off-site Shipments

Clean Harbors Aragonite is a storage facility for waste that cannot be incinerated. Materials shipped to other facilities include wastes that have been accepted for storage only, rejected wastes, and wastes handled as part of the transfer operations. The latter two scenarios are discussed in Sections 1.1 and 1.2 of this Attachment. Material that has been accepted for storage only and is not amenable for incineration is shipped to other off-site facilities. Clean Harbors Aragonite only accepts for storage, materials for shipment to off-site facilities that are acceptable by those other facilities. Determination of the appropriate available technologies for the waste is utilized to determine the final disposition of the waste. The waste profile and laboratory results are reviewed by the appropriate Clean Harbors Aragonite personnel to determine the proper destination. Clean Harbors Aragonite places storage-only material into appropriate storage areas. Clean Harbors Aragonite is deemed the generator for all off-site shipments of waste that have been accepted. An addendum accompanies each shipment identifying quantities of material from individual generators.

3.6 Containment Systems

Containers are stored in the container management building, which has floors sloped to separate and independent sumps of sufficient size to contain 25 percent of the total volume stored. The containment base is sloped to promote internal drainage and ultimate collection in sumps.

The concrete containment base (floor) is elevated approximately 4 feet from grade. The base is a solid, reinforced concrete slab free of cracks and gaps. The floor and curbing is constructed of a continuous, monolithic poured concrete floor. A minimum of 6 inch curbs are in the building. The concrete is epoxy coated with Tnemic or equivalent and is thus sufficiently impervious to contain leaks and spills. The foundation thickness is considered good engineering design practice for foundations.

The entire container management building is roofed and has four complete sides. The roof of the building is sloped to promote external drainage of any rainfall. In addition, the edges of the roof are extended outward to prevent any rainfall water leakage into the building.

The corridor for transportation in the container management building is separated by a slope from the storage areas.

Buildings 68 and 69-North/South have a chemical resistant epoxy-coated sump underneath the entire length and width of each building for secondary containment. Building 68 also has an underground tank that is connected to the building sump providing the additional containment required due to the building's fire suppression sprinkler system. All three buildings are roofed and enclosed on all sides.

The containment system for the breezeway is similar to that for the container management buildings except that it does not have walls. It does have a roof so that precipitation into the area is minimized.

The cylinder storage area and the cylinder feed station do not provide secondary containment as it is not required. The cylinder storage area and cylinder feed station are protected by Jersey barricades or other physical means to protect the cylinders from vehicular damage. Four different areas are identified within the cylinder storage area in order to accommodate incompatible compressed gasses. The cylinders are stored on racks to prevent contact with the ground and to provide support from tipping over.

There are four tank containment areas for the liquid tank farm. The tanks are grouped so that four tanks are located within each tank containment area. Each containment area is maintained to provide a minimum containment volume equivalent to the volume of one of the tanks. The concrete of the floor and curbing is epoxy coated with Tnemic or equivalent and is thus sufficiently impervious to contain leaks and spills. Any cracks or joints are sealed. The floors are sloped toward a sump in each containment area.

The large sludge tank is located within a concrete secondary containment system. It is a bermed area with a sump and pump for the collection and removal of accumulated material. The small sludge tank is located within a vault (sludge pit). The concrete in these containment systems is epoxy coated with Tnemic or equivalent and is thus sufficiently impervious to contain leaks and spills. Any cracks or joints are sealed. The floors are sloped toward a sump in each containment area.

The bulk solids tanks are placed on a concrete containment system and are constructed so that the bottoms of the tanks can be visually inspected for leaks. This is done from the concrete lined tunnel underneath the tanks. Normally, liquids are not placed in the bulk solids tanks. However, some liquids inevitably enter the tanks. Should a leak occur from one of the bulk solids tanks, it would drain toward the tunnel and be contained within the tunnel or, for a very large leak, within the sludge pit.

The incinerator and air pollution control equipment is also contained within secondary containment systems. The floors are concrete and are sloped to provide drainage of precipitation and any other leaks and spills toward sumps where it is collected. Berms are also provided to segregate containment areas and to further contain wastes or other materials. Liquids collected in the sumps in the neutralization area are returned to the neutralization tanks for reuse in the process. Liquids collected in the other sumps are pumped to the tank farm and then fed to the incinerator or are otherwise managed as a hazardous waste. Liquid that spills out of the deslagger may be placed directly back into the deslagger provided no treatment occurs prior to its reintroduction into the deslagger.

The bulk solids/sludge pad is located on concrete pads that are sloped to sumps to provide drainage and containment of precipitation and any other leaks and spills. The drum pumping storage area is located on a concrete pad with secondary containment provided by portable containment units. Any material collected from these secondary containment units/areas will be pumped out or otherwise removed and managed as a hazardous waste. When containers of waste are in the bulk solids/sludge pad or drum pumping storage area, the area will be protected by Jersey barricades or other physical means to protect the containers from vehicular damage.

Secondary containment for the drum pumping station is provided by a built-in containment system that is part of the glove box.

Secondary containment for the E-1, E-5 and E-4 receiving docks is provided by concrete sloped to a sump to provide drainage and containment of precipitation and any leaks or spills. Any material collected in these secondary containment areas will be removed and managed as a hazardous waste.

Secondary containment for waste stored in the laboratory cooler is provided by portable containment units. Any material collected in these containment units will be removed and managed as a hazardous waste.

There is a small containment berm around the direct burn pad. Any spills in this area will be directed to the sump near the "A" damper (SP-624). The piping from the sump will allow the contents of the sump to be pumped to another container such as a tanker or direct burn vessel as well as to the tank farm. This will keep incompatible direct burn spill material out of the tank farm tanks.

The drive-through direct burn station is the eastern half of a divided, recessed drive-through area just south of the slag pad. It serves as secondary containment for a direct burn tanker. Precipitation, spills or other liquids accumulated on the station will drain to sump SP-623B. The piping from the sump will allow the contents of the sump to be pumped to another container, such as a tanker or direct burn vessel, as well as to the tank farm. This will keep incompatible or undesirable spill material out of the tank farm tanks.

The corrosive direct burn station is the western half of the divided, recessed drive-through area just south of the slag pad. It serves as secondary containment for a direct burn tanker or bulk liquid tote. Precipitation, spills or other liquids accumulating in the station will drain to sump SP-623A. The piping from the sump will allow the contents of the sump to be pumped to another container such as a tanker or direct burn vessel as well as to the tank farm. This will keep incompatible or undesirable spill material out of the tank farm tanks.

The truck unloading direct burn station is located in the east and center bays of the truck unloading building, which serve as secondary containment for the direct burn tanker and other containers that may be stored there. A slot has been cut in the wall between the east bay and the middle bay to allow additional containment in the event there is discharged fire water in addition to a spill from the tanker or other containers. Spills or other liquids accumulated in the station will drain to sump SP-309. The piping from the sump will allow the contents of the sump to be pumped to another container such as a tanker or direct burn vessel as well as to the tank farm. This will keep incompatible or undesirable spill material out of the tank farm tanks.

The sumps at the facility are identified on drawing D-034-M-002-SP in Attachment 10. All sumps will be inspected and emptied as described in the inspection plan (Attachment 3).

4.0 Waste Processing

Containers, except compressed gas cylinders, that are ready to be fed to the incinerator are staged on the conveyor in a sequence directed by the Chemical Operations Manager or designee. These containers will typically be 55-gallon drums but may be smaller or could be as large as a 110-gallon salvage drum. The container is moved via the conveyor to the feed elevator. The elevator raises the container to the kiln slide-gate located in the feed chute. The ram feed mechanism then pushes the container into the kiln via the feed chute.

Alternatively, the contents of a container may be emptied into the kiln using the container dumping system. With the dumping system activated, the elevator lifts a container into position where the container is grabbed by the jaws of the dumping apparatus, the kiln slide gate opens, and the container is emptied into the kiln. A video camera directly above the dumping apparatus allows the operation to be viewed from both the control board and barrel feed station. After the contents of a container are dumped, the barrel feed operator has three choices: 1) the empty container is brought back down the elevator and returned for reuse to building E-4. This is the course of action under normal circumstances; 2) if the barrel feed operator observes that not all of the material has been emptied from the container, the slide gate can be reopened and the

contents of the container dumped a second time. This process can be repeated as many times as necessary until the container is emptied; 3) if the barrel feed operator observes a fire or other situation that warrants it, the slide gate can be opened and the entire container and contents can be released into the kiln. Additionally, a water spray nozzle located directly above the container dumping system is available in the case of a fire. This nozzle is activated by the barrel feed operator.

Should waste transfer or treatment be necessary prior to feeding the container, except for compressed gas cylinders, to the incinerator (e.g., to improve the burn characteristics of the charge), it will be conducted in the decant room (decanting only), the repack room in building E-4, one of the workstations in building E-2, or in the drive through direct burn station (decanting only). Liquids removed from the containers will be transferred to a permitted storage tank, a truck tanker in the drive through direct burn station, a direct burn vessel, or be repacked, solidified, or both. Containers of solids or sludge may also be transferred to the bulk solids tanks or small sludge tank. Any container, except a compressed gas cylinder, that cannot be emptied (per RCRA definition) may be shredded, if necessary, and incinerated. All open containers must be closed upon completion of the waste processing activity or when leaving the immediate vicinity of the container.

The waste processing operations that are conducted at the facility are decanting, repack operations, shredding, and direct burn, as described below.

4.1 Decanting

Clean Harbors Aragonite will accept containers with free liquids; however, liquids may be decanted prior to being incinerated. The liquid is decanted from the containers to one of the tanks in the tank farm, to a direct burn vessel, or to a truck tanker. The Chemical Operations Manager or designee(s) determine where decanting will occur and to which destination the decanted material will be transferred. Decanting takes place only in the decant room of the container processing building (building E-4) or in the drive through direct burn containment area. Waste decanted to a direct burn vessel or truck tanker may be fed to the kiln through the direct burn line, fed to the afterburner from the drive-through corrosive direct burn station, or transferred to the tank farm using the equipment in the truck unloading building.

Clean Harbors Aragonite, whenever possible, decants liquids (both ignitables and non-ignitables) prior to release for incineration. If the decanting operation is not able to process all containers as received, the receivers store containers holding liquid in a manner that allows easy access.

All material delivered to the Clean Harbors Aragonite facility that requires decanting is transferred to the container processing building (building E-4) or to the drive-through direct burn tanker station. Whenever possible, direct burn material is taken directly to a decant station for transfer to a direct burn vessel, a bulk liquids storage tank, or a direct burn tanker.

Decanting operations require use of PPE and when performed inside buildings, point source ventilation hoods for vapors to avoid adverse health impacts to the operators. The operators must wear PPE as designated by the profile sheet.

Facility Technicians utilize non-sparking tools during decant operations. Grounding/purging is used on tanks, lines, and containers.

4.2 Repack Operations

Repack operations may occur in two locations. These are the three workstations (WS1 through WS3) in building E-2 and the repack area in building E-4. Workstations WS1 and WS2 in building E-2 are open areas, primarily used in repacking and other container processing operations where the waste is not exposed to the atmosphere. Workstation WS3 is located within an enclosure in building E-2 , similar to the repack area in building E-4, and is typically used for repacking and other container processing operations where open containers are involved.

4.2.1 Description of Processing Activities

The processing activities that may occur are: 1) lab pack inspection, 2) lab pack repacking, 3) lab pack solidification, 4) liquid bulk-up, 5) compatibility testing and LEL screen, 6) container repacking, and 7) debris processing. These are described below.

1) Lab pack Inspection

Lab pack inspection involves removing the contents of a lab pack to verify the inventory sheet and then replacing the contents back into the lab pack.

2) Lab pack Repacking

Some or all of the content of a lab pack are removed and then selected contents are placed back into containers with the contents of other lab packs. The purpose of repacking is to increase/decrease the charge size to the incinerator. The inner containers of the lab packs are not opened but are redistributed to other lab packs. Excess absorbent and containers may be reused in making new lab packs.

3) Lab pack Solidification

This operation involves opening inner containers of lab packs and adding absorbent to the liquid. The purpose is to prepare a charge to the incinerator, which will have more uniform burning characteristics and produce less of a shock to the system when fed (e.g., minimizing CO excursions, thermal shock to the refractory, etc.). Absorbents used include, soil, vermiculite, cellulose, sawdust, floor dry, etc. The compatibility of the absorbent with the liquid in the containers will be evaluated and any incompatibilities noted on the lab pack instruction sheet. Also, if generators send too large an inner container, solidification may be used (or the material may be transferred to smaller containers). If the solidification operation involves an ignitable liquid, the operation may only occur in the E-4 repack area. The addition of solidification agent(s) to containers must not involve the active mixing of waste and agent.

4) Liquid Bulk-up

Some liquid is transferred to a larger container for the purpose of bulking up for eventual decanting. Solvents and other material are candidates for this process. If the liquid bulk-up operation involves an ignitable liquid, the operation may only occur in the E-4 repack area.

5) Compatibility Testing and LEL Testing

Any commingling of waste streams requires compatibility testing using the Clean Harbors Aragonite methods in the Waste Analysis Plan. Also, LEL testing on inner containers of lab packs may be necessary as required by the Waste Analysis Plan. These tests may be conducted in the repack or decant area of building E-4. Testing in building E-2 is limited to inner containers of lab packs. If information exists that indicates it is likely that the material is ignitable (i.e., flash less than 140 °F), Clean Harbors Aragonite will assume the material is ignitable and may only conduct these tests on that material in building E-4.

6) Container Repacking

Some or all of the waste is removed from its original container and is placed into other containers. Water, absorbent, or both may be added to improve the burning characteristics of the material (similar to the operation of lab pack solidification described above). Also, some repacking (splitting) is necessary to comply with the feed rate limits in the permit (e.g., metals). The purpose of repacking is to produce a container that meets the permit requirements and minimizes any upset conditions. If the container repacking operation involves an ignitable liquid, the operation may only occur in the E-4 repack area. The addition of solidification agent(s) to containers must not involve the active mixing of waste and agent.

In the case of repacking waste from a flow bin, the flow bin, containing a catalyst waste, is positioned on top of a custom platform. The container into which the waste will be transferred is placed under the flow bin and raised to the level necessary to form a seal between the flow bin and the container. An air-actuated slide gate controls the flow of material from the flow bin to the container. As the container is filled, the air displaced from the container is vented through a sock to filter any particulate matter. Flow bin repacking is limited to the E-4 repack area.

7) Debris Processing

Two types of debris may be treated in these areas. The first is waste debris that is treated to meet the requirements of §268.45 prior to landfilling. This only includes debris that is generated at the site (not waste that has been received from off site). The second type is equipment that may require being cleaned for the purpose of commencing maintenance activities (e.g., shredder teeth). The types of debris treatment that may be used are: abrasive blasting (E-4 only) and water washing and spraying. Sufficient containment devices must be in place to collect any residue from these operations. When this operation is ongoing, no other process may occur in that workstation or E-4 repack area.

4.2.2 General Operating Procedures

The storage requirements for rows A through G in building E-2 are unaffected by the operations in the workstations. All containers in any of the E-2 workstations or in the E-4 repack area will be staged into the proper location while in a workstation or repack area. Each workstation will be clearly marked off using lines painted on the floor. The number of containers being filled at each workstation or E-4 repack area will be limited by the space within that workstation or E-4 repack area. Sufficient space will be left within the workstations or E-4 repack area to allow unobstructed movement of personnel and necessary equipment.

All containers will be closed when repacking is not in operation. Not in operation is defined as no activity for thirty minutes at a workstation or E-4 repack area.

No material from an incompatible DOT hazard class may be located in any of the workstations in E-2 at any time. No material from an incompatible DOT hazard class may be located in the E-4 repack area at any time.

At the end of each shift each day, no more than the permitted capacity (four 55-gallon containers or 220 gallons per workstation or E-4 repack area) may remain in each workstation or in the E-4 repack area. All other containers must be removed and placed into permitted storage.

The proper Personnel Protective Equipment (PPE) shall be worn while conducting these operations. The required PPE will be specified on the profile sheet or site PPE matrix for non-profiled material (e.g., shredder teeth).

Workbenches, tables, and containers shall be grounded as necessary.

Repack operations will be conducted in a manner such that airborne dust is not visible in the building.

4.3 Shredding

Containers can be fed to the shredder either by using the elevator or by bulking (placing the entire container and its contents into a bulk solids tank) and then using the clamshell to feed the containers to the shredder. The container and contents are shredded into the bulk solids tank. Containerized waste can also be bulked by emptying the contents into the bulk solids tanks. The material may then be fed to the shredder by the clamshell. Similarly, bulk solids may be shredded by lifting the material with the clamshell and placing it in the shredder feed hopper.

Prevention of explosion danger in the shredder is accomplished by prohibiting potentially ignitable materials from being shredded.

The interlocks will allow operating the shredder in one of two modes:

1) Non-dusting and non-ignitable: The shredder will run continuously with the top flop gates remaining open to allow continuous feeding from the clamshell. Air flows through the open 20 inch damper to the combustion air system.

2) Dusting and non-ignitable: The shredder stops before the flop gate or barrel dump gate opens and restarts after the gate closes. Air flows through the open 20 inch damper to the combustion air system.

The procedure for determining the shredder operating mode is as follows:

1) Non-dusting and non-ignitable: The material has an LEL of less than 10% and is wet or otherwise incapable of dusting.

2) Dusting and non-ignitable: The material has an LEL of less than 10% and is dry or otherwise capable of dusting.

Determination of operating mode will be shown on the daily production plan originated by the Production Planning Manager or designee.

Clean Harbors Aragonite shall comply with the following conditions during both modes of operation described above:

1. The shredder area shall be equipped with a sprinkler system in accordance with Industrial Risk Insurer's pipe guidelines.

2. The shredding system shall be inspected in accordance with Attachment 3.

3. The shredder may be operated when the incinerator is not operating by venting it through the backup carbon adsorption system.

4. If containers of waste are bulked by placing the containers and their contents into a bulk solids tank, they will be restricted to processing through the shredder one profile at a time (with the exception of capacitors).

4.4 Bulk Waste Mixing and Blending

In order to achieve a more uniform feed to the incinerator, it may be desirable to blend bulk liquids and mix bulk solids.

The bulk liquid and sludge tanks are agitated by either a propeller-type mixer or by recirculation. The bulk solids may be mixed in the bulk solids tanks using a backhoe. The doors to the bulk solids tanks may not remain open for any mixing operations for more than 90 minutes during each 24 hour period.

4.4.1 Isocyanate Waste Bulking

Containerized liquid isocyanate wastes may be consolidated into bulk solids tanks T-403, T-404A and T-404B-East. When bulking isocyanate wastes, the contents of containers will be slowly poured onto the dirt or other waste in a bulk solids tank and mixed with a backhoe. The isocyanates are expected to react in various ways to form foams, polyurethanes, or other hardened or rubberized resins, which may then be fed to the incinerator as part of the bulk solids feed. All other applicable permit requirements, e.g., waste acceptance, waste tracking, compatibility testing, time limits for doors to be open when mixing in the bulk tanks, etc., must be satisfied for isocyanate waste bulking operations.

4.5 Direct Burn

Some liquid wastes are not compatible with the tanks in the tank farm or the materials stored in them. Additionally, some sludges are not appropriate for management in the sludge tanks. These wastes are ideally fed directly to the incinerator from direct burn vessels, direct burn tankers, or directly from the container. Direct burn vessels are used only for in-plant decant/direct burn operations. Direct burn tankers are used for bulk shipments from the generator and for in-plant decant/direct burn operations. Direct burn from a container is used for materials that may be incompatible with tank or direct burn vessel construction materials or other wastes. In addition, direct feeding from a container reduces the need for repacking.

4.5.1 Direct Burn Vessels

Liquid wastes or sludges are decanted to a moveable direct burn vessel from the decant room in building E-4. Prior to decanting into a direct burn vessel, the vessel is purged with nitrogen, if necessary, to ensure that there is an inert atmosphere within the vessel. During the decanting operations, the direct burn vessel is located just west of the decant room, within the secondary containment system of building E-4. Should it be necessary to store the filled direct burn vessel prior to feeding it to the incinerator, it will be stored in an appropriate permitted area of the container management building or other permitted container storage area.

After the direct burn vessels are filled, they are moved by forklift to the direct burn pad near the south side of the kiln front wall. A compressed air hose is connected to the agitator motor on the direct burn vessel to agitate the waste and keep solids in suspension. Nitrogen is connected to the top of the direct burn vessel and the discharge is connected through a flow metering system to the direct burn lance (A-101) on the kiln front wall. Alternatively, it could be piped through the sludge flow metering system and sludge lance (A-103).

The nitrogen pressure is manually adjusted to that pressure necessary to force the waste liquid through the pipeline. The pressure required will depend on the viscosity of the waste but can never exceed the 120 psig setting of the pressure relief valve on the direct burn vessel.

A fail closed valve is installed on the outlet line from the direct burn vessel. The instrument air line that operates the valve is made of plastic so it will melt if there is a fire. The melted line will relieve the air pressure on the valve actuator causing the valve to fail in the closed position, thereby stopping waste flow.

4.5.2 Direct Burn Tankers (Drive Through/Truck Unloading/Sludge Pad)

After a direct burn tanker is moved to the drive through direct burn station, sludge pad direct burn station or the truck unloading direct burn station and accepted, nitrogen is connected to the tanker to force the waste through the discharge hose to a strainer and a pump. The waste is then pumped through the flow metering system to the direct burn lance (A-101) in the kiln front wall. Alternatively, it could be piped through the sludge flow metering system and sludge lance (A-103).

Containerized liquid wastes or sludges may also be decanted to tankers. During decant operations, a direct burn tanker is located in the drive through direct burn station. Containers are moved to the direct burn station (platform over the drive through area) and transferred into the tanker using a vacuum pump. Waste transferred to the tanker is fed to the kiln through the direct burn feed line.

4.5.3 Direct Burn Liquid Feed System From a Tanker or Direct Burn Vessel

Flow to the direct burn lance from either a direct burn vessel or a direct burn tanker is controlled and measured by a control valve and flow meter similar to the sludge system. Since the same flow metering and feed system is used for both the direct burn vessel and the direct burn tanker, only one of these may be in use at any given time.

The direct burn lance is similar to the sludge lance in that it is a pipe within a pipe. Liquid waste is in the inner pipe and compressed air is in the outer pipe. The pressure from the direct burn vessel or from the pump on the direct burn tanker pushes the liquid into the kiln and the compressed air in the outer pipe aids in pushing the liquid into the kiln, causes atomization, and aids in burning.

Following off-loading of the direct burn vessel or direct burn tanker to the incinerator, the feed lines are blown clear with nitrogen to ensure incompatible materials do not mix and react.

4.5.4 Direct Burn Sludge Feed System

The direct burn sludge feed system uses the same feed monitoring and control system as the sludge feed system from the tanks. However, when feeding from one of the direct burn stations, the lines are isolated from the sludge recirculation line so that material from the direct burn vessel or direct burn tanker will not enter the sludge tanks. Since the same flow metering and feed system is used for the direct burn vessel, the direct burn tanker, and the sludge feed from the tanks, only one of these may be in use at any given time.

Following off-loading of the direct burn vessel or direct burn tanker to the incinerator, the feed lines are flushed with an appropriate solvent to ensure incompatible materials do not mix and react and to ensure that ignitable materials do not enter the sludge recirculation line and the sludge storage tanks.

4.5.5 Direct Burn Compressed Gas Cylinder Feed System

The contents of compressed gas cylinders are fed to the incinerator from an enclosure located on the west end of the slag pad. This enclosure is open on the south side and has openings at the top and bottom of the east and west sides to facilitate natural ventilation. One rack of cylinders (20 cylinders) will be brought to this cylinder feed station at a time. One cylinder at a time is removed from its rack and placed upon a tipping mechanism mounted on a scale (lecture bottles will be secured in a vice on a separate smaller scale). If the cylinder contains a liquid, the cylinder will be tilted. The contents of the cylinder flow from the cylinder through a valve that stops flow should an automatic waste feed cutoff occur, through a control valve, and then to an eductor at the afterburner burner station. The eductor is powered by nitrogen and pushes the gas or liquid into the south afterburner burner port. The valving and tubing are sized to contain cylinder pressure.

When the cylinder is empty, as determined by the system vacuum reaching the dead head vacuum for the eductor operating at the set nitrogen pressure, nitrogen will be used to flush the cylinder and equipment. To flush an empty cylinder, the cylinder will be pressurized with plant nitrogen by closing the automatic valves, hooking up nitrogen before the valves and letting nitrogen enter until line pressure is reached. The nitrogen is then disconnected and the automatic valves opened, letting the eductor draw the flush nitrogen out of the cylinder until dead head vacuum is reached. This process is repeated at least three times. Water is also available for flushing empty cylinders. After flushing, the cylinder will be returned to the customer or the valve will be removed and the cylinder landfilled or recycled. Documentation will be maintained to show that each cylinder was appropriately flushed. This documentation will include the cylinder number (i.e., document and item number) the date and time the flushing was completed and the pressures/vacuum attained during flushing. The operator performing the flush will sign the documentation indicating that proper procedures were followed. Cylinders that have leaked until they are empty, either in the glove box or at a remote location on site, will also be flushed in similar fashion.

At the cylinder feed station, a glove box has been installed that will be used to manage leaking cylinders. The leaking cylinder or cylinders (if more than one, all cylinders must be compatible) are placed in the glove box and with the doors closed, an eductor will draw a vacuum of 1-2" w.c. on the glove box and exhaust it into the afterburner. Air or nitrogen (for flammable materials) will bleed into the box as needed to keep the vacuum setpoint. In the event of a waste feed cut-off while a leaking cylinder is in the glove box, nitrogen to the glove box eductor will continue to flow and the glove box will continue to be exhausted to the afterburner. The cylinder will remain in the glove box until it is empty and its contents are exhausted to the afterburner. The glove box will only be used in emergencies to manage leaking cylinders and will not be used routinely to empty cylinders.

4.5.6 Direct Burn From a Container

The glove box at the drum pumping station will hold up to four 55-gallon containers of compatible liquid. A pallet of containers, one pallet at a time, will be transferred from the drum pump storage area or another permitted storage area to the glove box at the drum pump station.

The door on the glove box, gasketed to prevent leakage, will be closed with air cylinders, the bung on a container opened and a lance placed in the opening. Tubes supplying nitrogen will also be placed in the opening of the container, if the container contains flammable liquid. During processing, an eductor draws 90 scfm from the glove box to the afterburner and a vacuum breaker in the side of the glove box will bleed air into the box in order to maintain a vacuum of 1" water column. Waste is pumped through the lance to a diaphragm pump and valves to the sludge port in the front wall of the kiln. The wetted parts of the pump are conductive Teflon and the piping and valves are Teflon-lined to assure compatibility with the wastes being processed. The lance is made of Hastelloy. A dampener is integrated into the pump to achieve the required turndown and smooth out pulsation.

When waste is pumped from the container to the front wall of the kiln, a flow meter records the amount of liquid being fed. When the container is empty, air, or when processing flammable liquids, nitrogen, passing through the meter will record a high value and the record keeping programming will stop recording. The empty container will then be tilted and flushed with an appropriate liquid.

Before pumping waste that is not compatible with the last waste pumped, the system will be flushed with an appropriate flushing liquid. The production engineer responsible for the job will choose the flushing liquid based upon the waste. Water and fuel oil are available at the drum pump station. Nitrogen is also available for drying the piping if necessary.

There is an LEL monitor inside the glove box that will alarm locally and at the control board when an LEL above 20% is sensed. The glove box is equipped with a CO_2 fire protection system and explosion relief panels with a detonation flame arrestor located in the vent piping just before the eductor. The pressure relief device in the piping will vent back to the glove box.

The system will handle materials that the International Fire Code classifies as flammable liquids, corrosive, toxic and highly toxic materials, and oxidizers.

4.5.7 Direct Burn Corrosive Feed System

The western half of the drive through area south of the slag pad is used for corrosive waste tankers or bulk liquid totes. A berm has been placed in the drive through to divide the eastern half (drive through direct burn station) from the western half (drive through corrosive direct burn station) and prevent incompatible spills from mixing.

A tanker truck or bulk liquid tote is placed in the drive through corrosive direct burn station. A Teflon (TFE) hose is used to connect the tanker/tote to the pump. A diaphragm pump is used to transfer waste through feed piping and into the south side of the afterburner. It will be fed to the afterburner through a fuel oil lance location (designated as A-106B-5 and located at the nine o'clock (west side) position on the burner can) that is no longer used for fuel oil. Fuel oil, blend liquid, or both will always be fed to the south afterburner burner whenever there is feed from the drive through corrosive direct burn system to ensure a stable flame in the burner.

The pump's wetted parts, piping and valves will be conductive Teflon lined. Conductive gaskets will be used to connect pipe and hose. A dampener will be used to achieve the required turndown and smooth out pulsation caused by the pump. A pipe tee and valving in the main line will allow the pump to be bypassed and waste feed to occur by pressurizing the tanker/tote should that be desired.

When waste is fed to the afterburner, a flow meter records the amount of liquid fed. When the tanker or tote is empty, air or nitrogen passing through the meter will record an abnormally high value, indicating that there is no longer any material being fed. The recordkeeping program will stop recording and the block valves will close. When liquid is present, the flow meter will record the amount of waste being fed.

The tanker/tote and the waste transfer/feed line will be flushed with an appropriate liquid after all waste has been fed from the tanker or tote. The Production Engineer responsible for the job will select the flushing fluid based upon the waste. Water and diesel fuel are available at the corrosive direct feed station. Nitrogen will also be available for drying piping.

5.0 Waste Tracking

5.1 Introduction

Waste will be tracked while on site so that its location is known at any time. Containers, with the exception of direct burn tankers that are accepted into the direct burn stations, will be tracked by a barcode label placed on each container and tracked in the plant wide database. The location of bulk wastes will be tracked in the plant wide database. All wastes managed on-site will be tracked in this system (hazardous as well as non-hazardous).

The current location of all waste will be maintained in the plant wide database. If there is a temporary problem with this computer system that does not allow the input of waste tracking data, wastes may still be moved and processed on-site provided the following occurs: The tracking of waste is accomplished through a manual tracking system designed to record the same information as the plant wide database, and the plant wide database is updated with the information accumulated on this manual tracking system as soon as the database is again functioning. The maximum time that this manual tracking system can be used as a substitute for the plant wide database is 24 hours for containers and 72 hours for bulk wastes and residues.

5.2 Container Tracking (Excluding Cylinders and Direct Burn Tankers)

The barcode is a label that is affixed to each container. It contains a number that is unique to that container from which information regarding the container can be found. Clean Harbors barcodes may already be on incoming containers if they have come from other Clean Harbors facilities. During the receiving process at the facility, a Clean Harbors Aragonite barcode label (designated with "AG") will be placed on all of the containers that have been manifested to the facility. Containers manifested to another facility that are stopping at the Aragonite facility for transfer operations will not receive an Aragonite barcode. Containers that have been accepted at the facility will have a green label or mark on the Aragonite barcode label. All containers in

permitted storage except the receiving areas (floor areas of buildings E-1 and E-5, bays 1 through 6 when in receiving mode, bulk solids/sludge pad and E-1, E-5, E-4 receiving docks) and transfer wastes in bays 1-6 will have the Aragonite barcode label and a green acceptance label or mark on the barcode label except as provided in section 5.2.1.

The green acceptance label or mark is placed on the barcode of each container only after the contents have been sampled and it has been determined that the waste will be accepted. Once the green acceptance label or mark is placed on the barcode label on the container, it is considered to have been accepted by Clean Harbors Aragonite. Each container is identified by a unique number, which is on the barcode affixed to the container. Container inventory is tracked by row, level, and space in building E-7, level three. Container inventory is tracked by row and space in buildings E-2 (except for row G), E-3, E-6, and E-7 (first two levels), building 68 (space only), buildings 69-North/South and in the truck unloading direct burn station. Container inventory is tracked by row in the E-1 and E-5 floor areas, bays 1 through 6, building E-2, row G, bulk solids/sludge pad, E-1, E-5, and E-4 receiving docks and in building E-4. The container buildings and other container storage areas are marked with each row having an assigned letter. Each location within a row where tracking to a space occurs is given a space number. Every container in the container management areas will use the barcode system. The plant wide database will be updated each time a container is moved to another location. When a row of containers is moved and scanned to another storage location, shipment off site, or further processing, Clean Harbors will confirm that waste tracking shows all of the containers that were moved in the new location(s) and that the row is empty before moving any new containers into that row.

The tracking number will be used to track the container in real time. The following is a description of the information fields required on the Clean Harbors Aragonite barcode label. Additional information (e.g., weight, acceptance date, profile information, generator, final destination, etc.) can be found by the tracking number in the waste tracking system.

Tracking Number:	Unique number used to identify each individual item.
Common Name:	Brief description of the material.
Profile:	Waste profile number assigned by Aragonite.
Processing Waste Class:	Waste processing class code assigned upon acceptance by Aragonite.
Hazard:	Hazards posed by the material in the container.
Constituents:	Hazardous constituents, based on either the profile or shipping papers that are assigned by the person centrally receiving the container into the Clean Harbors system, present in the waste.

Manifest: Manifest number and line number on the manifest.

Repacked and consolidated containers will be given a new barcode containing the information listed above. These containers will be identified in waste tracking. The histories of these drums as well as cross references to previous item numbers can be found from the item number in the waste tracking system.

The ability exists in the waste tracking system to "untrack" (UNTK) wastes. This removes tracking history from that container, and that history cannot be recovered. The ability also exists in the waste tracking system to "void" wastes. This removes the waste from the system so that the waste appears to have never existed. Prior to performing either of these actions, the tracking history and any other information that will be deleted will be copied and filed in the operating record, along with a memo explaining and justifying why the change was made. Containers that have inventory locations of "DWB" (i.e., they have been lost for some period of time) shall not be untracked to remove this history.

5.2.1 Barcode/Green Acceptance Label or Mark Exemption

The need can exist to unload a truck even though the receiving area is not cleared from a previous load. To accommodate this situation, Row A in E-2, E-3, E-6 and E-7 (see drawing D-800-M-402) is designated as a temporary (10 days or less) extension of the receiving area.

To identify the containers in temporary storage and subject to this exemption, each container in temporary storage (A rows) will be marked with the tracking number. All containers in a space (all three levels of a numbered area as indicated on drawing D-800-M-402) will have the same temporary storage date. A board near each A aisle will indicate the temporary storage date (the date first placed into temporary storage) for each space within that A row. If there is no date indicated for a particular space, the containers in that space will have an Aragonite barcode with a green acceptance label or mark on the barcode.

Containers in temporary storage will be kept closed and will be inspected at the same frequency as accepted containers. No container can remain in temporary storage longer than 10 days.

5.2.2 Lost Containers (DWB)

There may be times when a container is not in the location indicated by the waste tracking system. There are several different scenarios under which this may happen.

In some cases, a container that physically exists (or existed) cannot be located at the facility. In other cases, containers may be physically present at the facility, but the waste tracking system shows them as having already been processed (which could indicate that another container was processed incorrectly in its place). These discrepancies may be due to factors such as:

- Containers not properly scanned into their current locations,
- Containers processed (repacked, decanted, shredded, bulked, etc.) without proper documentation,

- Information from the processing logs was not entered, or was entered incorrectly, into the waste tracking system,
- Hardware or software malfunctions,
- Shipping the incorrect containers off site,
- Incorrect labeling, double barcodes, etc.

There are also cases where a container has been created in waste tracking that does not physically exist, and therefore cannot be located. Examples of this include:

- Several containers are created in waste tracking for a repack or consolidate job and not all of the containers are physically created, but the extras are not removed from the waste tracking system,
- Containers are manifested to Aragonite from another Clean Harbors facility (so they are already in the waste tracking system) but are not actually shipped.

Within one business day of discovery of such discrepancies, Clean Harbors Aragonite will update the waste tracking system by moving the container record to the "DWB" virtual location and begin efforts to locate the container or resolve the discrepancy. Different efforts may be used depending on the circumstances of how the container was lost, but may include:

- Visually inspecting the previously scanned location(s),
- Checking processing logs and forms (e.g., repack logs, feed logs, decant logs, etc.),
- Conducting additional plant-wide or area-wide scans,
- Contacting other Clean Harbors facilities or generators,
- Reviewing video records, etc.

A file for each container or group of containers that are placed in the DWB location will be maintained. All efforts to locate the missing containers or resolve the discrepancies will be thoroughly documented and the documentation maintained in this file.

If it can be determined and documented what happened to the container(s), the waste tracking system will be updated with the correct information and the resolution explained and placed in the appropriate file. Sufficient explanation and documentation will be provided as to what happened to the container and why the changes to waste tracking were made.

There may be times when it cannot be determined what happened to the container(s) at issue. When Clean Harbors Aragonite has exhausted all methods for resolving these discrepant containers, waste tracking may be updated to show the most likely disposition for these containers. The file will include a description of what research was done and why the decision was made to discontinue looking. Within 30 days of making this determination and updating the waste tracking system, Clean Harbors will notify the Director in writing, noting the tracking numbers of the containers and what actions were taken.

In order to discover these discrepancies and correct them in a timely manner, the entire container inventory will be scanned at least once per month.

When the tracking history is changed or corrected, it may involve removing erroneous processing or inventory records. This is referred to as "untracking." Other operations in waste tracking that may erase tracking history include "voiding" containers or "resetting" manifests. Prior to untracking any container or doing any of these other operations that permanently delete tracking history in the waste tracking system, the history will be recorded and preserved. "DWB" inventory locations will not be removed from the tracking histories.

5.3 Decant Tracking

When a container is decanted, the original weight of the container will already be recorded in the database. When the container is moved to the decant staging area (building E-4) the location will be updated in the database. The container will be weighed again after the decanting operation. The weight of the decanted liquid and its new location (e.g., T-305) will be entered into the database. If all of the material from the container is not transferred, the material remaining will continue to be tracked with the container.

5.4 Repack Tracking

The original container to be repackaged will already be in the database. When a container is moved into a workstation or the E-4 repack area, the location in the database is updated. It will show the repack workstation to where the container is moved (e.g., WS1, etc.). Unique repack barcode labels for the containers to which the material is repackaged are generated by the computer tracking system. The numbering system is generated by the computer tracking system and cross-references to the original container. When these new repack containers are created in the database, the system automatically assigns them the same location as the original container (e.g., WS1, etc.). The location of these containers is then updated when they are moved from the workstation to storage or other locations.

As repacking occurs, items from the original containers are transferred to the repack containers in the database so that there is an accurate accounting of the contents and weight in each repack container. The contents of the containers are also updated in the database to account for absorbents or other materials that are added to the containers.

5.5 Shredding Tracking

When the container to be shredded is moved to the shredding area, the location in the database is updated. Then, after shredding, the database is updated to show the material in the new location. Clean Harbors Aragonite personnel will manually log all transfers from the shredder to the bulk solids tank. This manual log is given to a support clerk by the end of the day. The material is then transferred to the appropriate bulk tank (i.e., T-404B-West) in the computerized waste tracking database.

5.6 Direct Burn Tracking

The direct burn vessels are not currently in use at the facility. Before putting the direct burn vessels back into use at the facility, Aragonite will provide information for the tracking of these containers and waste and that information will be used to update this section of the permit.

When a direct burn tanker is used, the location of the waste is identified as T-411 (for the drive through direct burn station) and T-413 or T-414 (for the truck unloading direct burn station) in the waste tracking system and the waste will be moved to the tank similar to incoming loads of bulk liquid that are off-loaded to the tank farm. The waste tracking location for the sludge pad direct burn station is identified as T-412. The waste tracking location for the drive through corrosive direct burn station is identified as T-415. The tracking of waste fed to the incinerator from a direct burn tanker is similar to wastes fed from the tank farm.

When a determination is made to decant to a direct burn tanker, containers to be decanted are transferred from their location in the storage buildings to a designated area within the secondary containment at the drive through direct burn tanker station. The waste tracking system is updated to show that the containers have been moved to the drive through direct burn tanker station (i.e., "T-411D1, T-411D2, or T-411D3"). When a direct burn tanker is filled, the waste is transferred from the original container to the direct burn tanker (T-411) in the waste tracking system similar to a container that is decanted to the tank farm.

5.7 Container Bulk-up Tracking

When containers of waste are bulked-up (i.e., placed into a bulk solids tank or the contents emptied into a bulk solids tank or the small sludge tank) a tracking system similar to that for shredding is employed. Clean Harbors Aragonite personnel will manually log all of these transfers. This manual log is given to a support clerk by the end of the day. The material is then transferred to the appropriate bulk tank (i.e., T-403) in the computerized waste tracking database.

5.8 Bulk Solids, Liquids, and Sludge Tracking

When bulk materials are accepted and unloaded, they are entered into the database by no later than the following business day. The location indicated would be the tank into which the material is unloaded. Each time a transfer is made (e.g., from one tank to another, from a tank to the incinerator, etc.) the database will be updated within the following two business days. The bulk liquid tanks and the sludge tanks use a "first in, first out" tracking system. The bulk solids tanks use a "last in, first out" tracking system. These systems are not applicable for tracking waste codes; these procedures are discussed in the Waste Analysis Plan.

On occasion, material from a tank is placed into containers or it may be held temporarily in a tanker before transferring it to another tank (e.g., from tank cleanouts, feed rate verification tests, etc.). The containers will be barcoded and placed into permitted storage or the tanker will be placed in the drive through direct burn station, the truck unloading direct burn station, the drive through corrosive direct burn station, the bulk solids/sludge pad, E-1, E-5 or E-4 receiving docks, or will be off-loaded into a different tank within 24 hours. The waste tracking system will be updated to show the new location of the waste. Also, if waste is transferred from one tanker to another, documentation will be maintained to show that transfer. The receiving tanker will be placed in the drive through direct burn station, the drive through corrosive direct burn station, the truck unloading direct burn station or another permitted bulk container storage area or will be off-loaded into a different tank within 24 hours.

5.9 Compressed Gas Cylinder Tracking

After cylinders have been off-loaded, they will be placed in racks with each rack having a capacity of twenty 9" diameter by 52" high cylinders. Each rack will contain cylinders with compatible materials.

The tracking number will be used to track the cylinder in real time and cylinder barcodes will contain the same information as those described in section 5.2. The Aragonite barcode label is placed on the cylinder during the receiving process. A green acceptance label or mark is placed on the barcode only after it has been determined that the waste will be accepted. Once the Aragonite barcode label is placed on the cylinder and a green acceptance label or mark is placed on the barcode, it is considered to have been accepted by Aragonite. The barcode label will be placed so that it can be seen without removing the cylinder from the rack. If any cylinders are moved to the cylinder storage area prior to acceptance, each cylinder will be marked with the tracking number and the rack will be clearly identified as having cylinders that are not yet accepted. Racks of cylinders will not be moved to the cylinder feed station until all cylinders on that rack have been accepted. Each cylinder is identified by a unique number that has been affixed to the cylinder. The cylinder storage area is divided into four quadrants based upon compatibility. Cylinder inventory is tracked by the quadrant and row and space where the rack of cylinders is located. Additionally, the cylinders will be tracked in other locations (i.e., in the cylinder feed station or one of the receiving buildings). The glove box and an isolated location onsite where leaking containers are managed are also identified as locations in the waste tracking system. Each time a rack of cylinders is moved or fed to the incinerator and individual cylinders moved to manage leaks, the waste tracking system is updated.

An operator will remove one rack at a time from the cylinder storage area and transport the rack to the cylinder feed station. Each rack will be fed as a job with the incineration chemistry being the same for all cylinders in a rack (using the worst-case chemistries from any cylinder on the rack). Before the first cylinder in a rack is fed, the job for that rack will be started by the control board operator. When the last cylinder in a rack has been fed, the job is stopped.

5.10 Drum Pumping Station

Containers that are fed directly to the incinerator through the drum pumping station will be moved by forklift from storage to the pumping station on the slag pad. They may also be staged or stored on the drum pumping storage pad prior to moving them to the drum pumping station. The drum pumping station and drum pumping storage locations are tracked in the waste tracking system as DRUMPUMP and DBSTO01 through DBSTO06.

Containers will be assembled into jobs with the incineration chemistry being the same for all of the containers on the job, using the worst-case chemistries from any container on the job. Before the first container on a job is fed, the control board operator will start the job for that container. This is done by selecting a virtual tank (SP01) where the chemistries for the job are stored as the source for the feed to that lance. When the last container on the job has been fed, the control board operator will stop the job.

After pumping, each container will be weighed. The weight of the container and its new location will be entered into the database. If all of the material was not pumped to the kiln, the material remaining will continue to be tracked with the container.

6.0 Emissions of Organic Vapors from Equipment Leaks

This section outlines the requirements for complying with the air emission standards for equipment leaks as established in 40 CFR 264 Subpart BB. The requirements include tagging and marking of affected equipment, inspecting and monitoring the equipment, repairing and reporting equipment leaks, and record keeping.

The regulated equipment includes any valve, pump, flange, grooved pipe connection, pressure relief device, or open ended valve that is in contact with gas, liquid, or sludge hazardous waste.

In order to eliminate the difficulty and expense of characterizing the organic content of the many waste streams processed at the facility, it will be assumed that all of the gas, liquid, and sludge waste have greater than ten percent organic content and all equipment is considered to be in light liquid service. Thus all equipment that is used for processing gas, liquid, or sludge waste is subject to these requirements. The physical state of all pumpable hazardous waste is considered to be liquid.

6.1 Equipment Tagging and Marking

All equipment subject to these requirements (described above) will be marked with a tag containing a unique equipment identification number. For most of these items the tag will be a weatherproof bar coded tag. These tags will also have the identification number in human readable form. Flanges that are covered by insulation must also be marked, either by bar coded tags, or by permanently marking the outside of the flange cover. These markings must be plainly visible. New or replaced equipment will also be marked as described above.

A weatherproof repair tag will be attached to any piece of equipment for which there is evidence of a leak (defined below). Each repair tag will be marked with the following information: the date the evidence of a leak was found (date suspected), the date that the leak was actually detected by monitoring (date detected), and the equipment Subpart BB identification number. The repair tag must be left in place before, during, and after repairs. It may be removed from any equipment item, except for valves, after the equipment repairs have been inspected. Repair tags for valves must remain on the valves until each valve has been monitored for two successive months without detecting any leaks.

6.2 Inspecting and Monitoring the Equipment

Monitoring in this section means testing with a VOC analyzer in accordance with EPA Method 21. Inspection shall mean a visual inspection for leaks. Leaks shall be defined as (1) hydrocarbon vapor monitor (HVM) instrument readings greater than 10,000 ppm, (2) visual indications of liquids dripping from a pump seal, or (3) physical evidence of leaking (visual, auditory, olfactory, or otherwise).

The pumps at the facility must be visually inspected weekly and monitored monthly. There are no alternative schedules for pump monitoring. Pumps must always be monitored each month regardless of how infrequently leaks are found.

Valves will be monitored on a monthly or quarterly basis. Initially, all valves shall be monitored monthly. For each valve that is not found to be leaking for two consecutive months, the monitoring frequency can be reduced to quarterly monitoring. An alternate frequency may be implemented upon notification of the Director as outlined below.

(1) If fewer than two percent of all the valves within a hazardous waste management unit have detectable leaks for at least two consecutive quarters, all of the valves in that hazardous waste management unit may be monitored on a semi-annual basis.

(2) If fewer than two percent of all the valves within a hazardous waste management unit have detectable leaks for at least five consecutive quarters, all of the valves in that hazardous waste management unit may be monitored on an annual basis.

If the percentage of valves for any hazardous waste management unit exceeds two percent after achieving any of these monitoring frequencies, then the monitoring frequency will revert back to monthly. If after reverting to monthly monitoring, the requirements are again met for the alternate frequencies, then Aragonite may again notify the Director of the facility's intent to comply with the alternate frequency.

There are conservation vents and rupture disks located on each tank farm tank and the large sludge tank. The conservation vents are vented through a closed vent system to a control device (afterburner or carbon canister system) as described in Attachment 14. The flanges around the rupture disks are marked. In the event that a rupture disk releases pressure, the disk will be replaced, and it will be monitored and achieve a standard of no detectable emissions (<500 ppm) within five calendar days of the pressure release.

There are currently no sampling connections in place at the facility. There are also no compressors at the facility that are in use with hazardous waste streams.

An open ended valve is any valve, except pressure relief valves, having one side of the valve seat in contact with the process fluid and one side open to the atmosphere, either directly or through an open pipe. All open ended valves that are connected to gas, liquid, or sludge hazardous waste piping must be fitted with a threaded cap or plug, which can be finger tight. The caps or plugs must be in place at all times except when necessary to open the valves during normal use of the equipment. As an alternative, a second valve may be installed in series. If a second valve is used, the first (inner) valve must be closed first and any hazardous waste allowed to drain or vent before the second (outer) valve is closed so that no process fluid is behind the second valve.

Scheduled monitoring of gasketed flanges, blind flanges, and grooved connectors is not required. If there is physical evidence of a leak, the flange or connector must be monitored within five days of such evidence being noted.

6.3 Repairing and Reporting Equipment Leaks

When leaks are found, the first attempt at repair (tightening packing nuts, etc.) must be initiated within five calendar days from the date the leak was found. The repairs must be completed within fifteen days of the discovery of the leak.

Repairs to leaking equipment can be delayed, provided that any of the following conditions are met:

(1) The repair is technically infeasible without shutting down the hazardous waste management unit. Repairs delayed for this reason must be completed before the end of the next scheduled hazardous waste management unit shutdown.

(2) The equipment is valved out and any hazardous waste is removed.

(3) For valves, the emissions resulting from the repair would be greater than the emissions resulting from delaying the repair. The purged material resulting from the repair must be collected and destroyed or captured in a control device.

(4) For valves, repairs beyond the next hazardous waste management unit shutdown are allowed if the valve must be replaced and valve supplies have been depleted (the valve assembly supplies must have been sufficiently stocked before they were depleted). This delay of repair past the next shutdown will not be allowed unless the next shutdown occurs sooner than six months after the first shutdown.

(5) Delays in repairs for pumps are allowed if the repair requires the use of a dual mechanical seal system that includes a barrier system, and the repair is completed as soon as possible but not later than six months from when the leak was detected.

Reports shall be submitted to the Director every six months and shall contain the following information: (1) the name, address, and EPA ID number of the Aragonite facility, (2) for any equipment discovered to be leaking and which was not repaired within the fifteen day limit, provide the identification number, the hazardous waste management unit location, a description of the piece of equipment, and the reason(s) for not completing the repairs within the required time, and (3) dates of any hazardous waste management unit shutdowns. If all repairs were completed within the required time frames, no report will be required.

6.4 Record keeping

A database will be maintained that includes all of the required equipment. It will include the equipment identification number, the type of equipment, the hazardous waste management unit to which it is related, dates of inspection or monitoring, the name or ID number of the inspector,

physical evidence of the leak (visual, sound, etc.), dates of leak detection, dates of first attempt at repair, and dates the repair was completed. Maintenance work orders will also be prepared and maintained to document the repairs made to the equipment. The identification numbers of all valves that are designated as either "difficult to monitor" or "unsafe to monitor" shall be entered into the database.

The approximate location of each piece of equipment will be shown on drawings to be maintained at the facility. These drawings and the database will be updated to reflect changes that are made to the equipment or piping. The equipment will be grouped into hazardous waste management units. These are defined by functional boundaries (i.e., kiln, front wall, south ABC, etc.)

The records shall include the dates of pressure release, repair dates, and monitoring results for rupture disks. For each pump, it will be specified which method of compliance will be used (either "monthly monitoring" or "equipped with dual mechanical seals"). If repairs to leaking equipment are delayed beyond fifteen days, the reason for the delay will be recorded as well as the expected date of repair. Documentation supporting the delay of repair of a valve beyond the next hazardous waste management shutdown shall be maintained. The statement and signature of the operator (or designee) who made the decision that a repair could not be made without a hazardous waste management shutdown shall also be maintained.

If either of the alternate frequencies for monitoring of valves has been chosen, all supporting documentation (e.g., letters to the Director, monitoring results, calculation of percentage leaking if there are any leaking, equipment lists by hazardous waste management unit, etc.) shall be maintained.

ATTACHMENT 8

WASTE STORAGE, PROCESSING, AND TRACKING

Attachment 8
Waste Storage, Processing, and Tracking

Table of Contents

1.0 Introduction 1
1.1 Transfer Operations 1
1.2 Rejected Wastes 1
2.0 Waste Receipt and Acceptance 2
2.1 Pre-transport Requirements 2
2.2 Vehicle Check-in and Routing 2
2.3 Acceptance and Sampling 3
2.3.1 Vans and Flat Beds 3
2.3.2 Bulk Solids, Sludges, Liquids 3
2.4 Check-out Procedure 5
3.0 Waste Storage 5
3.1 Containers 5
3.2 Bulk Solids, Sludges, and Liquids 8
3.3 Empty Containers 9
3.4 Site-generated Wastes 10
3.5 Off-site Shipments 10
3.6 Containment Systems 10
4.0 Waste Processing 13
4.1 Decanting 14
4.2 Repack Operations 15
4.2.1 Description of Processing Activities 15
4.2.2 General Operating Procedures ..... 17~~16~~
4.3 Shredding 17
4.4 Bulk Waste Mixing and Blending 18
4.4.1 Isocyanate Waste Bulking ..... 19~~18~~
4.5 Direct Burn 19
4.5.1 Direct Burn Vessels 19
4.5.2 Direct Burn Tankers (Drive Through/Truck Unloading/Sludge Pad) ..... 20~~19~~
4.5.3 Direct Burn Liquid Feed System From a Tanker or Direct Burn Vessel 20
4.5.4 Direct Burn Sludge Feed System 20
4.5.5 Direct Burn Compressed Gas Cylinder Feed System ..... 21~~20~~
4.5.6 Direct Burn From a Container 21
4.5.7 Direct Burn Corrosive Feed System 22
5.0 Waste Tracking 23
5.1 Introduction 23
5.2 Container Tracking (Excluding Cylinders and Direct Burn Tankers) 23
5.2.1 Barcode/Green Acceptance Label or Mark Exemption 25
5.2.2 Lost Containers (DWB) 25
5.3 Decant Tracking ..... 27~~26~~

5.4 Repack Tracking 27
5.5 Shredding Tracking 27
5.6 Direct Burn Tracking 27
5.7 Container Bulk-up Tracking 28
5.8 Bulk Solids, Liquids, and Sludge Tracking 28
5.9 Compressed Gas Cylinder Tracking ..... 29~~28~~
5.10 Drum Pumping Station 29
6.0 Emissions of Organic Vapors from Equipment Leaks ..... 30~~29~~
6.1 Equipment Tagging and Marking 30
6.2 Inspecting and Monitoring the Equipment 30
6.3 Repairing and Reporting Equipment Leaks ..... 32~~31~~
6.4 Record keeping 32

1.0 Introduction

This Attachment outlines specific requirements for the management of wastes prior to incineration at the Clean Harbors Aragonite facility. It discusses available management options and specifies requirements for storing, managing, processing, and tracking wastes in containers and in bulk.

This Attachment addresses the management of wastes accepted at the facility. However, there are two situations where wastes that have not been accepted are managed at the facility. These are transfer operations and rejected wastes. Management of these wastes is discussed in Sections 1.1 and 1.2 below. The management of site-generated waste is discussed in Section 3.4.

1.1 Transfer Operations

After off-loading, Clean Harbors Aragonite may temporarily (ten days or less) hold wastes manifested to another facility similarly to what is allowed in Utah Admin. Code R315-6-1.12. This will be referred to as transfer operations. These containers will not be subject to the requirements for barcodes/green acceptance labels or marks, but they will be clearly marked/labeled as transfer wastes. They may only be held in E-1, E-5, or in bays 1-6. If transfer wastes are held in one or more bays, accepted and transfer wastes will not be placed in the same row and wastes will be segregated according to compatibility. The date that they are placed into the holding area will be clearly documented in the operating record.

1.2 Rejected Wastes

Occasionally, a generator will ship waste to Aragonite for treatment that for a variety of reasons will not be accepted. These are referred to as "rejected wastes." The procedures below will be used to ensure that these wastes will be managed properly while on site and shipped off site expeditiously.

There are three scenarios that may occur where rejected waste may need to remain on site for a short period of time. The first scenario is where waste arrives that Aragonite cannot or does not want to manage. The second scenario is for scheduled containers that initially appear to match the manifest. However, based on fingerprint analyses, LDR form inspection, etc., Aragonite may discover that it cannot or does not want to manage some of the waste that is received. The third scenario is when containers arrive that are not identified on the manifest. These will be considered to be rejected waste while the discrepancy is investigated. These containers may be held at the facility for a short time before resolving the issue and accepting them or shipping them off site.

Under all of these scenarios, the container would receive a barcode during the receiving process. The barcode would appear similar to other Aragonite barcodes. In the waste tracking system, the processing waste class code will be set to "RTAF", "RTG", or "RTGI" and the date the reject determination was made shall be noted in the comments section of the waste tracking system. Containers in reject status will be identified on the *Drum Reject Report*.

The location of all rejected waste will be tracked in the computerized waste tracking system similar to all other wastes while on site. The waste tracking system will clearly show that the material is rejected waste and when this determination was made. All containers of rejected waste will be barcoded to facilitate tracking and will also be clearly labeled as rejected near the barcode on the container.

Rejected containers, except gas cylinders, may be temporarily placed in the "K" or "M" rows of building E-1 or in any of the bays to await shipment off-site. Arrangements will be made to ship the material to another TSD or to return it to the generator. Rejected wastes will not remain on-site for longer than 60 days, unless an extension has been granted by the Director. When a rejected container is shipped off site, the tracking activity code will be updated to "RTAF", "RTG", or "RTGI" and the actual date will be set to the date the container leaves the facility. Containers that have been rejected and shipped off-site will also be identified on the *Drum Reject Report*.

If Aragonite decides to accept a container of waste that was initially rejected (e.g., an extra drum that arrived on a load) that determination will be made within 60 days of receipt of the container (PREC date). These containers will also be identified in the waste tracking system such that they are captured by the *Drum Reject Report*. The final date code will be the date they were accepted. The date that they were initially rejected will be preserved in the comments section in waste tracking.

Rejected compressed gas cylinders may be temporarily placed in the cylinder storage area to await shipment off site.

2.0 Waste Receipt and Acceptance

2.1 Pre-transport Requirements

All generators must prepare all shipments in accordance with §262.20-23, (Subpart B-the Manifest), §262.30-33 (Subpart C-Pre-transport Requirements), State of Utah regulations, and the Clean Harbors Aragonite guidelines for waste acceptance and receiving. All containers must meet HM-181, Department of Transportation Performance Oriented Packaging (DOT acceptable containers).

2.2 Vehicle Check-in and Routing

All trucks arriving at the Clean Harbors Aragonite, facility must stop and their drivers check in at the front desk. Drivers present the manifest(s) to the guard, who performs a visual inspection of the manifest and vehicle. For bulk shipments, the driver is directed to the scale and the incoming weight is recorded on the weigh ticket. Material shipping in vans or flat beds will be weighed by the container, not the load. The truck is then directed to the proper unloading/sampling area or drop area. Trucks with frozen waste may also be placed in the thaw shed to thaw.

2.3 Acceptance and Sampling

Waste is received from Clean Harbors Aragonite approved transporters in vans, flat-bed trailers, bulk solid trucks (end-dumps, dump trucks, and roll-offs), and bulk liquid tankers.

2.3.1 Vans and Flat Beds

Vans proceed to one of the container building unloading docks and unloading begins. Clean Harbors Aragonite personnel remove the containers from the vehicle to the scale station and record the weight on each container. Alternately, if a load of containers comes from a Clean Harbors facility where the containers were weighed previously (e.g., a hub or transfer facility), the Permittee may use Procedure #REC1003 instead of weighing each container at the facility. The appropriate containers will be moved to the sampling area. Containers are only opened for visual inspection and sampling in the receiving and holding floor areas of buildings E-1 and E-5 and in bays 1 through 6 when in receiving mode. Compressed gas cylinders will be placed on racks for transport and storage in the cylinder storage area. If the van cannot be unloaded immediately, it may be directed to one of the drop areas (east of the container storage buildings or along the fence east of the container storage buildings -- another location south of main street may be used on a temporary basis only after receiving oral approval from DSHW) until an unloading dock is available.

Flat-bed trailers and vans are used for transporting large items such as transformers, and frequently carry smaller DOT acceptable containers intermixed with the load. These containers are off-loaded and checked through the same system as described above. However, very heavy or very tall items such as large transformers and flow bins containing catalyst may require unloading in an area not restricted by the height of the doorway or the size of forklift that is being used, such as the bulk solids pad.

The receivers verify container count and also verify the integrity of the containers. Manifest discrepancies (count) are reported to the appropriate personnel. Sampling is done per the Waste Analysis Plan. Sampling and analysis results are used to determine the appropriate management process(es) for the material. Aragonite barcodes are placed on the containers during this receiving process. Once it has been determined that the waste will be accepted, a green acceptance label or mark will be placed on the Aragonite barcode. After the waste has been accepted, the containers may be moved from the receiving and holding areas to the storage or processing areas. Compressed gas cylinders may be moved to the compressed gas storage area prior to acceptance. They will not remain in the receiving building for more than 24 hours. All discrepancies will be resolved with the generator prior to accepting the containers. Written documentation of these discussions and resolutions will be clearly noted in the document packet for each manifest.

2.3.2 Bulk Solids, Sludges, Liquids

Bulk solids containers (end-dumps, dump trucks, and roll-offs) must be covered. Tarps or lids are acceptable container covers if the tarps or lids are visually free of cracks, holes, gaps, or other open spaces. Tarps or lids may be removed for sampling or removing waste but must be closed upon completion of the activity or leaving the vicinity of the container. Any bulk solids

container that will not be off-loaded within 24 hours of receipt must be visually inspected for visible cracks, holes in tarps, gaps, or other open space into the interior of the container. Efforts must be made to repair any defect found within 24 hours after detection. The repair must be complete within five days after detection or the waste must be removed from the container. The container cannot be used to manage waste until the repair is complete.

The opening device or dome on tankers may be opened for sampling, visual inspection of the contents, or washout, but must be closed upon completion of the activity or leaving the vicinity of the container. Any tanker that cannot be off-loaded within 24 hours of receipt must be visually inspected for proper closure of all hatches and valves.

Trucks containing bulk wastes proceed to one of the unloading areas (bermed area east of the bulk solids building for bulk solids and sludges, the bulk liquids unloading building for bulk liquids, the drive through direct burn station, the sludge pad direct burn station, the drive through corrosive direct burn station, or the truck unloading direct burn station for tankers to be fed directly to the kiln/afterburner), or the sampling platform between the control room and the utility building where sampling is done per the Waste Analysis Plan. During inclement weather sampling may be done in the bulk liquids unloading building (E-14) or the thaw shed. If the truck cannot be unloaded immediately, it may be directed to the drop area (along the fence east of the bulk solids building for bulk solids and sludges, or northwest of the bulk liquids unloading building for bulk liquids -- another location south of main street may be used on a temporary basis only after receiving oral approval from DSHW) until an unloading area is available. No unloading can commence until the necessary laboratory analyses are complete and the necessary waste tracking requirements are met.

Sampling and analysis results are used to determine the appropriate management process(es) for the material. Once it has been determined that the waste will be accepted, the waste is accepted by off-loading it to a receiving/storage tank, by placing the tanker in the drive through direct burn station (if not already located there) and transferring the material to tank T-411 in the waste tracking system, placing the tanker in the drive through corrosive direct burn station (if not already located there) and transferring the material to tank T-415 in the waste tracking system, placing the tanker in the truck unloading direct burn station (if not already located there) and transferring the material to tank T-413 or T-414 in the waste tracking system, or by placing (if not already located there), placing the tanker in the sludge pad direct burn station (if not already located there) and transferring the material to tank T-412 in the waste tracking system, the tanker or bulk container on the bulk solids/sludge pad or E-1, E-5, or E-4 receiving docks and by placing a green label or mark on the barcode indicating that the waste has been accepted. Prior to and during the unloading of bulk liquids, personnel visually check to ensure all valves are in the appropriate position, transfer lines are secured and the drip pans or absorbent pads are under the connections. A check is made to ensure that compatibility and other waste acceptance analyses are complete prior to commencing the transfer. Clean Harbors Aragonite personnel remain on-the-job while waste is removed from the transport vehicle and until all transfer lines have been disconnected.

In order to reduce demurrage costs, Clean Harbors Aragonite may transfer direct burn bulk waste from a customer tanker to a site tanker. The tanker-to-tanker transfer is performed in the truck unloading building, E-14, much like a tanker to tank transfer. The receiving tanker is DOT certified for integrity and roadworthiness annually and is subject to all permit requirements for direct burn feeding.

The appropriate Clean Harbors Aragonite personnel visually inspect bulk solid waste material during the off-loading to a bulk solids tank. Should the employee see any abnormal or non-conforming material, off-loading stops until the situation is rectified.

Each document packet will contain records indicating that each waste has been accepted or rejected, initialed and dated by the appropriate waste acceptance personnel.

2.4 Check-out Procedure

Once the transport vehicle is empty, it is directed to the scales for weigh-out. The transporter receives a copy of the weigh ticket and the signed manifest. Clean Harbors Aragonite personnel will note if the actual weight deviates by more than 10% of the manifested weight, constituting a manifest discrepancy (bulk loads only). If this occurs, the appropriate personnel will be informed and will commence discussions with the generator. Written documentation of these discussions and resolutions will be clearly noted in the document packet for each manifest.

3.0 Waste Storage

3.1 Containers

This section details the processes that will be used to store waste in containers at the facility.

The east storage building contains a receiving area (building E-5 floor area), three bays for receiving or waste storage depending on the operating mode (bays 1, 2, and 6), and two special waste storage areas (building E-6 and E-7), which are for liquids that are classified as "ignitable" or have a flash point of less than 140 °F. The west storage building has a receiving area (building E-1 floor area), three bays for receiving/waste storage or staging for outbound shipping depending on the operating mode (bays 3, 4, and 5), and two general storage areas (buildings E-2 and E-3). Three workstations are located in building E-2 which are used for processing containers of waste and building E-3 has two safes for storage of DEA materials. Buildings 68 and 69-North/South, located east of container storage building E-2, are separate storage areas exclusively for incompatibles. The container processing area (building E-4) contains the decant room and the repack area. The decant inventory area in the E-4 building may also be used for sampling in conjunction with compatibility testing for liquids. Building E-4 and the breezeway (covered, bermed area between building E-4 and the kiln front wall) are used for staging containers for feed to the kiln, repack area, decant area, bulk solids tanks, small sludge tank, and/or shredder. The direct burn pad is used to hold a direct burn vessel while its contents are being fed to the kiln. The drive through direct burn station, the sludge pad direct burn station, the drive through corrosive direct burn station, and the truck unloading direct burn station are

used to hold tankers while their contents are being fed to the kiln/afterburner. The drive through corrosive direct burn station may also be used to hold bulk liquid totes while their contents are being fed to the afterburner. The truck unloading direct burn station may also be used to store smaller containers on pallets. The bulk solids/sludge pad may be used to store tankers, bulk containers, and smaller containers on pallets. The drive through direct burn station is also used to hold containers of waste while their contents are being decanted to a tanker. The drum pumping storage area is used to stage containers for processing through the drum pumping station, with the drum pumping station being the area where containers are held while their contents are fed to the kiln. The E-1, E-5, and E-4 receiving docks may be used to store bulk containers, containers on pallets and containers in refrigerated trailers. These areas are shown on drawings D-800-M-402 and D-800-M-403 in Attachment 10. Containers of waste may also be stored in the lab cooler. Compressed gas cylinders are stored in the cylinder storage area west of Center Street and north of 2nd South Street as indicated on Drawings D-034-M-002 and D-034-M-401 and at the cylinder feed station indicated on D-034-M-002.

The current operating mode (receiving or storage) of bays 1 through 6 will be maintained in the operating record and prominently displayed in buildings E-1 and E-5 at all times.

Material waste profiles, sample results, and ultimate destinations provide the basis for determining where each container is stored and what is done to prepare the material for incineration or transfer.

The waste types commonly stored in the general storage area consist of liquids, dirt and debris from spills, capacitors awaiting shredding, transformers awaiting draining and flushing, solids awaiting incineration or transfer to off-site facilities, and empty containers that will be either incinerated, reused, crushed and disposed off site, or recycled.

Dioxin-contaminated wastes will be stored similarly to all RCRA wastes. Handling instructions will be based on the characteristics, special instructions provided on waste profile sheets, and lab results for compatibility.

Clean Harbors Aragonite may accept infectious wastes provided the generator packages them in appropriate containers meeting DOT packaging requirements. These containers are packaged so as to prevent leakage or rupture during transport to the site. If possible, scheduling of any infectious waste will coincide with immediate feed to the kiln. The containers will be fed via the elevator and ram feeder. In the event these wastes cannot be incinerated within seven days of receipt at the facility, they will be shipped off
site or will be stored in a permitted storage area that will be maintained at or below 40 °F and fed as soon as possible so that storage will be minimized.

Containers stored at the facility will be DOT acceptable containers with the following exceptions:

- containers of waste generated on-site need not be DOT acceptable but must be in good condition and must be covered or must have a drum liner which is kept closed. They must also be made of appropriate materials of construction and be sturdy enough to be safely transported inside the buildings and throughout the facility.

- in the event that a generator does not use DOT acceptable containers to ship its wastes, the containers can only be stored if they are in good condition, covered or sealed, and sturdy enough to be safely transported inside the buildings and throughout the facility.

Roll-off bins, used for bulk solids, will not be stored in the building but will be placed into other permitted storage, emptied into a bulk solids tank or transferred to an EPA approved hazardous waste landfill. "Super Sack" type bags or boxes or other similar DOT bulk containers may be used to store contaminated soil or other dry debris in the container management areas.

All containers, regardless of size, must be visually inspected within 24 hours of receipt and every 12 months thereafter. Visual inspection includes checking the container and its cover and closure devices for cracks, holes, gaps, or other open spaces into the interior of the container. Any defects must be corrected within 24 hours of detection.

Any container that is larger than 119 gallons and is not a DOT acceptable container must be tested in accordance with EPA Method 21 and §265.1084(d) for organic emissions if it contains hazardous waste in light material service. If the monitoring shows the emissions to be greater than 500 ppm, the container must be repacked or processed within five days. Containers that have been demonstrated, within the preceding 12 months, to be vapor-tight, as specified by §264.1086(h), are exempt from these requirements.

Containers are inspected for leaks prior to pallet pickup. Should any container, except cylinders, leak, the contents are transferred to a new container or the container is placed into an overpack. Should transfer of the waste to another container be necessary because of poor condition of the container, it is normally conducted in the decant room or repack room in building E-4 or one of the workstations in building E-2. However, if moving it may cause it to leak or otherwise deteriorate, it may be transferred at its current location. If a leaking container is to be overpacked, any leakage is corrected by overpacking the container before it is moved. Compressed gas cylinders that are determined to be leaking will be transferred to the glove box at the cylinder feed station and the cylinder contents vented to the incinerator. If the incinerator is down when a cylinder is leaking, the cylinder will be transferred to a remote area of the facility and allowed to leak until empty.

If the spilled material flows into a sump, Clean Harbors Aragonite employees will follow the spill containment procedures and immobilize the spilled material using absorbents and neutralizing chemicals (if recommended). Sumps are kept clean and free of chemical spillage in order to minimize the danger of an incompatible reaction occurring in the sump.

If the spilled material splashes against containers of an incompatible waste material, the containers will be moved into a safe area and cleaned of all chemical residue. The floor/pad area will be decontaminated in accordance with emergency spill containment procedures.

All containers are marked and labeled with the appropriate RCRA/TSCA hazardous waste labels prior to storage in the container storage area.

Containers are transported from the dock to the assigned row and space. Forklifts are used to move the palletized containers within the container management areas.

Compressed gas cylinders are transferred into racks in the receiving buildings upon receipt and transferred to the cylinder storage area for storage. Only compatible cylinders are stored in a given rack and racks holding incompatible cylinders are stored in separated areas of the cylinder storage area. Determination of compatibility and storage separation distances are in accordance with the International Fire Code.

3.2 Bulk Solids, Sludges, and Liquids

Bulk wastes accepted at the facility are either liquids, solids, or sludges. This section outlines the management of bulk wastes at the facility.

The blend liquid tanks and the aqueous liquids tanks are to be operated in accordance with the process flow diagrams D-034-PF-301 sheets 1 and 2. Bulk liquids are off-loaded at the bulk liquids unloading building, E-14. After assuring that the material is compatible with the material already in the tank, it is pumped to a liquids tank (T-301 through T-312 or T-321 through T-324). Blended liquids may be pumped from tanks T-301 through T-306, T-309, T-310, and T-321 through T-324 for feed to the incinerator burners. Material from different tanks may be commingled to obtain a more uniform blend and to obtain the desired feed chemistries and characteristics. The source of blend feed to the burners may come from up to two sources (i.e., two tanks) at one time. The aqueous waste feed comes from tanks T-307, T-308, T-311, or T-312. There are occasions when material must be removed from the tanks, and it is not moved to another tank in the tank farm or fed to the incinerator (e.g., tank cleanouts for inspections or maintenance, removal of material that may be plugging the tanks, etc.). In these instances, the material may be placed into containers or into a tanker. The containers will be barcoded and placed into permitted storage. The tanker will be placed in the drive through direct burn station, the drive through corrosive direct burn station the sludge pad direct burn station, the truck unloading direct burn station, the bulk solids/sludge pad, E-1, E-5 or E-4 receiving docks, or will be off-loaded within 24 hours by pumping the material into a liquids tank or to the sludge tank system. Any residues in the tanker may be flushed into drums or the bulk solids tanks system.

There may be times where, due to safety or compliance concerns, or for other reasons, bulk liquids will not or cannot be stored in a tank. In these situations, the tanker truck may be placed in either the drive through direct burn station, the sludge pad direct burn station, or the truck unloading direct burn station and the material fed directly to the direct burn lance, A-101.

Alternately, a tanker or bulk liquid tote may be placed in the drive through corrosive direct burn station and the material fed directly to the afterburner through lance A-106B-5.

Fuel oil trucks are unloaded adjacent to the fuel oil storage tank using a truck pump or from truck unloading. Tank T-305 may be used as a fuel tank after it has been decontaminated from hazardous waste/PCB use. The tank is equipped with separate inlets for waste and fuel and outlets to the waste feed header and fuel oil header. If the tank system is used for waste, connections to the fuel oil system are blanked off and waste connections are blanked off when the tank is utilized for fuel.

Liquid material that is too viscous or otherwise unsuitable for management in the liquid tank farm is put in the sludge system. Normally it is off-loaded to the small sludge tank (T-406) from a tanker parked in the bermed area directly east of the tank. However, sludge can also be off-loaded directly to the large sludge tank (T-401). Sludge that is received in drums can also be poured from the drums into the small sludge tank. Sludge may be transferred between either of the two sludge tanks. A recirculation line to near the front wall provides a source of sludge feed to the incinerator. Part of the recirculating sludge is drawn off through a mass flow meter to the kiln front wall sludge lance (A-103). Similar to bulk liquids, there may be times where, due to safety or compliance concerns, or for other reasons, sludges will not or cannot be stored in a tank. In these situations, the tanker truck may be placed in either the drive through direct burn station, sludge pad direct burn station or the truck unloading direct burn station and the material fed directly to the sludge lance, A-103.

Bulk solids material is off-loaded into permitted container storage on the bulk solids/sludge pad, E-1, E-5, or E-4 receiving docks, or emptied into either the small bulk solids tanks or the large bulk solids tank. Material from small containers or the entire container with its contents may also be placed in the tanks. These may be dumped through one of the large roll up doors on the east side of the building. Material may be processed from any of these tanks through the shredder to make a more manageable, uniform, and homogenous feed. Drums from the breezeway may also be fed directly to the shredder. The discharge of the shredder is into tank T-404B-West. Material from the tanks is moved to the other tanks, to the shredder, or to the apron feeder feed hopper by means of a clamshell.

3.3 Empty Containers

Empty containers are managed by incineration, recycling, off-site disposal and reuse.

Empty containers requiring incineration are staged in the container processing room for possible shredding and subsequent incineration.

Acceptable containers that are in good condition and empty as defined in Utah Admin. Code R315-2-7 are set aside. They are staged and may be sent off site to a recycler.

Empty containers may be managed by shipping them off site for disposal at an approved facility.

The facility may select empty containers for reuse by Clean Harbors Aragonite for purposes such as repacking. The technician inspects these containers and ensures that they are empty. Empty containers are placed in the container processing, general storage, and receiving areas.

Empty compressed gas cylinders are returned to the customer or de-valved and shipped off site to a landfill or recycler.

3.4 Site-generated Wastes

Clean Harbors Aragonite is a generator of incineration waste residue (slag, spray dryer and baghouse catch) that will be reburned or manifested off site to an EPA-approved disposal facility. The residue holding areas exist to handle the incinerator residue prior to reburning or off-site shipment. These areas are located east and west of the liquid tank farm, and south of the incineration system. Clean Harbors Aragonite is also a generator of other site-generated waste (e.g. spill cleanups, PPE, etc.). These wastes will be processed on-site or shipped off site similar to other wastes at the facility. All waste that has been accepted by Clean Harbors Aragonite or generated on-siteand that must be shipped off site is manifested off site with Clean Harbors Aragonite as the generator. An addendum will accompany each shipment identifying waste codes, waste quantities, and land disposal restrictions.

Roll-offs or other DOT acceptable containers will be used to accumulate incinerator slag and baghouse/spray dryer residue. These containers are suitable for transportation to an approved disposal facility. The slag and residue containers are designed to be reusable. For these and other site-generated wastes, the requirements of Utah Admin. Code R315-5 shall apply.

3.5 Off-site Shipments

Clean Harbors Aragonite is a storage facility for waste that cannot be incinerated. Materials shipped to other facilities include wastes that have been accepted for storage only, rejected wastes, and wastes handled as part of the transfer operations. The latter two scenarios are discussed in Sections 1.1 and 1.2 of this Attachment. Material that has been accepted for storage only and is not amenable for incineration is shipped to other off-site facilities. Clean Harbors Aragonite only accepts for storage, materials for shipment to off-site facilities that are acceptable by those other facilities. Determination of the appropriate available technologies for the waste is utilized to determine the final disposition of the waste. The waste profile and laboratory results are reviewed by the appropriate Clean Harbors Aragonite personnel to determine the proper destination. Clean Harbors Aragonite places storage-only material into appropriate storage areas. Clean Harbors Aragonite is deemed the generator for all off-site shipments of waste that have been accepted. An addendum accompanies each shipment identifying quantities of material from individual generators.

3.6 Containment Systems

Containers are stored in the container management building, which has floors sloped to separate and independent sumps of sufficient size to contain 25 percent of the total volume stored. The containment base is sloped to promote internal drainage and ultimate collection in sumps.

The concrete containment base (floor) is elevated approximately 4 feet from grade. The base is a solid, reinforced concrete slab free of cracks and gaps. The floor and curbing is constructed of a continuous, monolithic poured concrete floor. A minimum of 6 inch curbs are in the building. The concrete is epoxy coated with Tnemic or equivalent and is thus sufficiently impervious to contain leaks and spills. The foundation thickness is considered good engineering design practice for foundations.

The entire container management building is roofed and has four complete sides. The roof of the building is sloped to promote external drainage of any rainfall. In addition, the edges of the roof are extended outward to prevent any rainfall water leakage into the building.

The corridor for transportation in the container management building is separated by a slope from the storage areas.

Buildings 68 and 69-North/South have a chemical resistant epoxy-coated sump underneath the entire length and width of each building for secondary containment. Building 68 also has an underground tank that is connected to the building sump providing the additional containment required due to the building's fire suppression sprinkler system. All three buildings are roofed and enclosed on all sides.

The containment system for the breezeway is similar to that for the container management buildings except that it does not have walls. It does have a roof so that precipitation into the area is minimized.

The cylinder storage area and the cylinder feed station do not provide secondary containment as it is not required. The cylinder storage area and cylinder feed station are protected by Jersey barricades or other physical means to protect the cylinders from vehicular damage. Four different areas are identified within the cylinder storage area in order to accommodate incompatible compressed gasses. The cylinders are stored on racks to prevent contact with the ground and to provide support from tipping over.

There are four tank containment areas for the liquid tank farm. The tanks are grouped so that four tanks are located within each tank containment area. Each containment area is maintained to provide a minimum containment volume equivalent to the volume of one of the tanks. The concrete of the floor and curbing is epoxy coated with Tnemic or equivalent and is thus sufficiently impervious to contain leaks and spills. Any cracks or joints are sealed. The floors are sloped toward a sump in each containment area.

The large sludge tank is located within a concrete secondary containment system. It is a bermed area with a sump and pump for the collection and removal of accumulated material. The small sludge tank is located within a vault (sludge pit). The concrete in these containment systems is epoxy coated with Tnemic or equivalent and is thus sufficiently impervious to contain leaks and spills. Any cracks or joints are sealed. The floors are sloped toward a sump in each containment area.

The bulk solids tanks are placed on a concrete containment system and are constructed so that the bottoms of the tanks can be visually inspected for leaks. This is done from the concrete lined tunnel underneath the tanks. Normally, liquids are not placed in the bulk solids tanks. However, some liquids inevitably enter the tanks. Should a leak occur from one of the bulk solids tanks, it would drain toward the tunnel and be contained within the tunnel or, for a very large leak, within the sludge pit.

The incinerator and air pollution control equipment is also contained within secondary containment systems. The floors are concrete and are sloped to provide drainage of precipitation and any other leaks and spills toward sumps where it is collected. Berms are also provided to segregate containment areas and to further contain wastes or other materials. Liquids collected in the sumps in the neutralization area are returned to the neutralization tanks for reuse in the process. Liquids collected in the other sumps are pumped to the tank farm and then fed to the incinerator or are otherwise managed as a hazardous waste. Liquid that spills out of the deslagger may be placed directly back into the deslagger provided no treatment occurs prior to its reintroduction into the deslagger.

The bulk solids/sludge pad is located on concrete pads that are sloped to sumps to provide drainage and containment of precipitation and any other leaks and spills. The drum pumping storage area is located on a concrete pad with secondary containment provided by portable containment units. Any material collected from these secondary containment units/areas will be pumped out or otherwise removed and managed as a hazardous waste. When containers of waste are in the bulk solids/sludge pad or drum pumping storage area, the area will be protected by Jersey barricades or other physical means to protect the containers from vehicular damage.

Secondary containment for the drum pumping station is provided by a built-in containment system that is part of the glove box.

Secondary containment for the E-1, E-5 and E-4 receiving docks is provided by concrete sloped to a sump to provide drainage and containment of precipitation and any leaks or spills. Any material collected in these secondary containment areas will be removed and managed as a hazardous waste.

Secondary containment for waste stored in the laboratory cooler is provided by portable containment units. Any material collected in these containment units will be removed and managed as a hazardous waste.

There is a small containment berm around the direct burn pad. Any spills in this area will be directed to the sump near the "A" damper (SP-624). The piping from the sump will allow the contents of the sump to be pumped to another container such as a tanker or direct burn vessel as well as to the tank farm. This will keep incompatible direct burn spill material out of the tank farm tanks.

The drive-through direct burn station is the eastern half of a divided, recessed drive-through area just south of the slag pad. It serves as secondary containment for a direct burn tanker. Precipitation, spills or other liquids accumulated on the station will drain to sump SP-623B. The piping from the sump will allow the contents of the sump to be pumped to another container, such as a tanker or direct burn vessel, as well as to the tank farm. This will keep incompatible or undesirable spill material out of the tank farm tanks.

The corrosive direct burn station is the western half of the divided, recessed drive-through area just south of the slag pad. It serves as secondary containment for a direct burn tanker or bulk liquid tote. Precipitation, spills or other liquids accumulating in the station will drain to sump SP-623A. The piping from the sump will allow the contents of the sump to be pumped to another container such as a tanker or direct burn vessel as well as to the tank farm. This will keep incompatible or undesirable spill material out of the tank farm tanks.

The truck unloading direct burn station is located in the east and center bays of the truck unloading building, which serve as secondary containment for the direct burn tanker and other containers that may be stored there. A slot has been cut in the wall between the east bay and the middle bay to allow additional containment in the event there is discharged fire water in addition to a spill from the tanker or other containers. Spills or other liquids accumulated in the station will drain to sump SP-309. The piping from the sump will allow the contents of the sump to be pumped to another container such as a tanker or direct burn vessel as well as to the tank farm. This will keep incompatible or undesirable spill material out of the tank farm tanks.

The sumps at the facility are identified on drawing D-034-M-002-SP in Attachment 10. All sumps will be inspected and emptied as described in the inspection plan (Attachment 3).

4.0 Waste Processing

Containers, except compressed gas cylinders, that are ready to be fed to the incinerator are staged on the conveyor in a sequence directed by the Chemical Operations Manager or designee. These containers will typically be 55-gallon drums but may be smaller or could be as large as a 110-gallon salvage drum. The container is moved via the conveyor to the feed elevator. The elevator raises the container to the kiln slide-gate located in the feed chute. The ram feed mechanism then pushes the container into the kiln via the feed chute.

Alternatively, the contents of a container may be emptied into the kiln using the container dumping system. With the dumping system activated, the elevator lifts a container into position where the container is grabbed by the jaws of the dumping apparatus, the kiln slide gate opens, and the container is emptied into the kiln. A video camera directly above the dumping apparatus allows the operation to be viewed from both the control board and barrel feed station. After the contents of a container are dumped, the barrel feed operator has three choices: 1) the empty container is brought back down the elevator and returned for reuse to building E-4. This is the course of action under normal circumstances; 2) if the barrel feed operator observes that not all of the material has been emptied from the container, the slide gate can be reopened and the

contents of the container dumped a second time. This process can be repeated as many times as necessary until the container is emptied; 3) if the barrel feed operator observes a fire or other situation that warrants it, the slide gate can be opened and the entire container and contents can be released into the kiln. Additionally, a water spray nozzle located directly above the container dumping system is available in the case of a fire. This nozzle is activated by the barrel feed operator.

Should waste transfer or treatment be necessary prior to feeding the container, except for compressed gas cylinders, to the incinerator (e.g., to improve the burn characteristics of the charge), it will be conducted in the decant room (decanting only), the repack room in building E-4, one of the workstations in building E-2, or in the drive through direct burn station (decanting only). Liquids removed from the containers will be transferred to a permitted storage tank, a truck tanker in the drive through direct burn station, a direct burn vessel, or be repacked, solidified, or both. Containers of solids or sludge may also be transferred to the bulk solids tanks or small sludge tank. Any container, except a compressed gas cylinder, that cannot be emptied (per RCRA definition) may be shredded, if necessary, and incinerated. All open containers must be closed upon completion of the waste processing activity or when leaving the immediate vicinity of the container.

The waste processing operations that are conducted at the facility are decanting, repack operations, shredding, and direct burn, as described below.

4.1 Decanting

Clean Harbors Aragonite will accept containers with free liquids; however, liquids may be decanted prior to being incinerated. The liquid is decanted from the containers to one of the tanks in the tank farm, to a direct burn vessel, or to a truck tanker. The Chemical Operations Manager or designee(s) determine where decanting will occur and to which destination the decanted material will be transferred. Decanting takes place only in the decant room of the container processing building (building E-4) or in the drive through direct burn containment area. Waste decanted to a direct burn vessel or truck tanker may be fed to the kiln through the direct burn line, fed to the afterburner from the drive-through corrosive direct burn station, or transferred to the tank farm using the equipment in the truck unloading building.

Clean Harbors Aragonite, whenever possible, decants liquids (both ignitables and non-ignitables) prior to release for incineration. If the decanting operation is not able to process all containers as received, the receivers store containers holding liquid in a manner that allows easy access.

All material delivered to the Clean Harbors Aragonite facility that requires decanting is transferred to the container processing building (building E-4) or to the drive-through direct burn tanker station. Whenever possible, direct burn material is taken directly to a decant station for transfer to a direct burn vessel, a bulk liquids storage tank, or a direct burn tanker.

Decanting operations require use of PPE and when performed inside buildings, point source ventilation hoods for vapors to avoid adverse health impacts to the operators. The operators must wear PPE as designated by the profile sheet.

Facility Technicians utilize non-sparking tools during decant operations. Grounding/purging is used on tanks, lines, and containers.

4.2 Repack Operations

Repack operations may occur in two locations. These are the three workstations (WS1 through WS3) in building E-2 and the repack area in building E-4. Workstations WS1 and WS2 in building E-2 are open areas, primarily used in repacking and other container processing operations where the waste is not exposed to the atmosphere. Workstation WS3 is located within an enclosure in building E-2 , similar to the repack area in building E-4, and is typically used for repacking and other container processing operations where open containers are involved.

4.2.1 Description of Processing Activities

The processing activities that may occur are: 1) lab pack inspection, 2) lab pack repacking, 3) lab pack solidification, 4) liquid bulk-up, 5) compatibility testing and LEL screen, 6) container repacking, and 7) debris processing. These are described below.

1) Lab pack Inspection

Lab pack inspection involves removing the contents of a lab pack to verify the inventory sheet and then replacing the contents back into the lab pack.

2) Lab pack Repacking

Some or all of the content of a lab pack are removed and then selected contents are placed back into containers with the contents of other lab packs. The purpose of repacking is to increase/decrease the charge size to the incinerator. The inner containers of the lab packs are not opened but are redistributed to other lab packs. Excess absorbent and containers may be reused in making new lab packs.

3) Lab pack Solidification

This operation involves opening inner containers of lab packs and adding absorbent to the liquid. The purpose is to prepare a charge to the incinerator, which will have more uniform burning characteristics and produce less of a shock to the system when fed (e.g., minimizing CO excursions, thermal shock to the refractory, etc.). Absorbents used include, soil, vermiculite, cellulose, sawdust, floor dry, etc. The compatibility of the absorbent with the liquid in the containers will be evaluated and any incompatibilities noted on the lab pack instruction sheet. Also, if generators send too large an inner container, solidification may be used (or the material may be transferred to smaller containers). If the solidification operation involves an ignitable liquid, the operation may only occur in the E-4 repack area. The addition of solidification agent(s) to containers must not involve the active mixing of waste and agent.

4) Liquid Bulk-up

Some liquid is transferred to a larger container for the purpose of bulking up for eventual decanting. Solvents and other material are candidates for this process. If the liquid bulk-up operation involves an ignitable liquid, the operation may only occur in the E-4 repack area.

5) Compatibility Testing and LEL Testing

Any commingling of waste streams requires compatibility testing using the Clean Harbors Aragonite methods in the Waste Analysis Plan. Also, LEL testing on inner containers of lab packs may be necessary as required by the Waste Analysis Plan. These tests may be conducted in the repack or decant area of building E-4. Testing in building E-2 is limited to inner containers of lab packs. If information exists that indicates it is likely that the material is ignitable (i.e., flash less than 140 °F), Clean Harbors Aragonite will assume the material is ignitable and may only conduct these tests on that material in building E-4.

6) Container Repacking

Some or all of the waste is removed from its original container and is placed into other containers. Water, absorbent, or both may be added to improve the burning characteristics of the material (similar to the operation of lab pack solidification described above). Also, some repacking (splitting) is necessary to comply with the feed rate limits in the permit (e.g., metals). The purpose of repacking is to produce a container that meets the permit requirements and minimizes any upset conditions. If the container repacking operation involves an ignitable liquid, the operation may only occur in the E-4 repack area. The addition of solidification agent(s) to containers must not involve the active mixing of waste and agent.

In the case of repacking waste from a flow bin, the flow bin, containing a catalyst waste, is positioned on top of a custom platform. The container into which the waste will be transferred is placed under the flow bin and raised to the level necessary to form a seal between the flow bin and the container. An air-actuated slide gate controls the flow of material from the flow bin to the container. As the container is filled, the air displaced from the container is vented through a sock to filter any particulate matter. Flow bin repacking is limited to the E-4 repack area.

7) Debris Processing

Two types of debris may be treated in these areas. The first is waste debris that is treated to meet the requirements of §268.45 prior to landfilling. This only includes debris that is generated at the site (not waste that has been received from off site). The second type is equipment that may require being cleaned for the purpose of commencing maintenance activities (e.g., shredder teeth). The types of debris treatment that may be used are: abrasive blasting (E-4 only) and water washing and spraying. Sufficient containment devices must be in place to collect any residue from these operations. When this operation is ongoing, no other process may occur in that workstation or E-4 repack area.

4.2.2 General Operating Procedures

The storage requirements for rows A through G in building E-2 are unaffected by the operations in the workstations. All containers in any of the E-2 workstations or in the E-4 repack area will be staged into the proper location while in a workstation or repack area. Each workstation will be clearly marked off using lines painted on the floor. The number of containers being filled at each workstation or E-4 repack area will be limited by the space within that workstation or E-4 repack area. Sufficient space will be left within the workstations or E-4 repack area to allow unobstructed movement of personnel and necessary equipment.

All containers will be closed when repacking is not in operation. Not in operation is defined as no activity for thirty minutes at a workstation or E-4 repack area.

No material from an incompatible DOT hazard class may be located in any of the workstations in E-2 at any time. No material from an incompatible DOT hazard class may be located in the E-4 repack area at any time.

At the end of each shift each day, no more than the permitted capacity (four 55-gallon containers or 220 gallons per workstation or E-4 repack area) may remain in each workstation or in the E-4 repack area. All other containers must be removed and placed into permitted storage.

The proper Personnel Protective Equipment (PPE) shall be worn while conducting these operations. The required PPE will be specified on the profile sheet or site PPE matrix for non-profiled material (e.g., shredder teeth).

Workbenches, tables, and containers shall be grounded as necessary.

Repack operations will be conducted in a manner such that airborne dust is not visible in the building.

4.3 Shredding

Containers can be fed to the shredder either by using the elevator or by bulking (placing the entire container and its contents into a bulk solids tank) and then using the clamshell to feed the containers to the shredder. The container and contents are shredded into the bulk solids tank. Containerized waste can also be bulked by emptying the contents into the bulk solids tanks. The material may then be fed to the shredder by the clamshell. Similarly, bulk solids may be shredded by lifting the material with the clamshell and placing it in the shredder feed hopper.

Prevention of explosion danger in the shredder is accomplished by prohibiting potentially ignitable materials from being shredded.

The interlocks will allow operating the shredder in one of two modes:

1) Non-dusting and non-ignitable: The shredder will run continuously with the top flop gates remaining open to allow continuous feeding from the clamshell. Air flows through the open 20 inch damper to the combustion air system.

2) Dusting and non-ignitable: The shredder stops before the flop gate or barrel dump gate opens and restarts after the gate closes. Air flows through the open 20 inch damper to the combustion air system.

The procedure for determining the shredder operating mode is as follows:

1) Non-dusting and non-ignitable: The material has an LEL of less than 10% and is wet or otherwise incapable of dusting.

2) Dusting and non-ignitable: The material has an LEL of less than 10% and is dry or otherwise capable of dusting.

Determination of operating mode will be shown on the daily production plan originated by the Production Planning Manager or designee.

Clean Harbors Aragonite shall comply with the following conditions during both modes of operation described above:

1. The shredder area shall be equipped with a sprinkler system in accordance with Industrial Risk Insurer's pipe guidelines.

2. The shredding system shall be inspected in accordance with Attachment 3.

3. The shredder may be operated when the incinerator is not operating by venting it through the backup carbon adsorption system.

4. If containers of waste are bulked by placing the containers and their contents into a bulk solids tank, they will be restricted to processing through the shredder one profile at a time (with the exception of capacitors).

4.4 Bulk Waste Mixing and Blending

In order to achieve a more uniform feed to the incinerator, it may be desirable to blend bulk liquids and mix bulk solids.

The bulk liquid and sludge tanks are agitated by either a propeller-type mixer or by recirculation. The bulk solids may be mixed in the bulk solids tanks using a backhoe. The doors to the bulk solids tanks may not remain open for any mixing operations for more than 90 minutes during each 24 hour period.

4.4.1 Isocyanate Waste Bulking

Containerized liquid isocyanate wastes may be consolidated into bulk solids tanks T-403, T-404A and T-404B-East. When bulking isocyanate wastes, the contents of containers will be slowly poured onto the dirt or other waste in a bulk solids tank and mixed with a backhoe. The isocyanates are expected to react in various ways to form foams, polyurethanes, or other hardened or rubberized resins, which may then be fed to the incinerator as part of the bulk solids feed. All other applicable permit requirements, e.g., waste acceptance, waste tracking, compatibility testing, time limits for doors to be open when mixing in the bulk tanks, etc., must be satisfied for isocyanate waste bulking operations.

4.5 Direct Burn

Some liquid wastes are not compatible with the tanks in the tank farm or the materials stored in them. Additionally, some sludges are not appropriate for management in the sludge tanks. These wastes are ideally fed directly to the incinerator from direct burn vessels, direct burn tankers, or directly from the container. Direct burn vessels are used only for in-plant decant/direct burn operations. Direct burn tankers are used for bulk shipments from the generator and for in-plant decant/direct burn operations. Direct burn from a container is used for materials that may be incompatible with tank or direct burn vessel construction materials or other wastes. In addition, direct feeding from a container reduces the need for repacking.

4.5.1 Direct Burn Vessels

Liquid wastes or sludges are decanted to a moveable direct burn vessel from the decant room in building E-4. Prior to decanting into a direct burn vessel, the vessel is purged with nitrogen, if necessary, to ensure that there is an inert atmosphere within the vessel. During the decanting operations, the direct burn vessel is located just west of the decant room, within the secondary containment system of building E-4. Should it be necessary to store the filled direct burn vessel prior to feeding it to the incinerator, it will be stored in an appropriate permitted area of the container management building or other permitted container storage area.

After the direct burn vessels are filled, they are moved by forklift to the direct burn pad near the south side of the kiln front wall. A compressed air hose is connected to the agitator motor on the direct burn vessel to agitate the waste and keep solids in suspension. Nitrogen is connected to the top of the direct burn vessel and the discharge is connected through a flow metering system to the direct burn lance (A-101) on the kiln front wall. Alternatively, it could be piped through the sludge flow metering system and sludge lance (A-103).

The nitrogen pressure is manually adjusted to that pressure necessary to force the waste liquid through the pipeline. The pressure required will depend on the viscosity of the waste but can never exceed the 120 psig setting of the pressure relief valve on the direct burn vessel.

A fail closed valve is installed on the outlet line from the direct burn vessel. The instrument air line that operates the valve is made of plastic so it will melt if there is a fire. The melted line will relieve the air pressure on the valve actuator causing the valve to fail in the closed position, thereby stopping waste flow.

4.5.2 Direct Burn Tankers (Drive Through/Truck Unloading/Sludge Pad)
After a direct burn tanker is moved to the drive through direct burn station, sludge pad direct burn station or the truck unloading direct burn station and accepted, nitrogen is connected to the tanker to force the waste through the discharge hose to a strainer and a pump. The waste is then pumped through the flow metering system to the direct burn lance (A-101) in the kiln front wall. Alternatively, it could be piped through the sludge flow metering system and sludge lance (A-103).

Containerized liquid wastes or sludges may also be decanted to tankers. During decant operations, a direct burn tanker is located in the drive through direct burn station. Containers are moved to the direct burn station (platform over the drive through area) and transferred into the tanker using a vacuum pump. Waste transferred to the tanker is fed to the kiln through the direct burn feed line.

4.5.3 Direct Burn Liquid Feed System From a Tanker or Direct Burn Vessel
Flow to the direct burn lance from either a direct burn vessel or a direct burn tanker is controlled and measured by a control valve and flow meter similar to the sludge system. Since the same flow metering and feed system is used for both the direct burn vessel and the direct burn tanker, only one of these may be in use at any given time.

The direct burn lance is similar to the sludge lance in that it is a pipe within a pipe. Liquid waste is in the inner pipe and compressed air is in the outer pipe. The pressure from the direct burn vessel or from the pump on the direct burn tanker pushes the liquid into the kiln and the compressed air in the outer pipe aids in pushing the liquid into the kiln, causes atomization, and aids in burning.

Following off-loading of the direct burn vessel or direct burn tanker to the incinerator, the feed lines are blown clear with nitrogen to ensure incompatible materials do not mix and react.

4.5.4 Direct Burn Sludge Feed System
The direct burn sludge feed system uses the same feed monitoring and control system as the sludge feed system from the tanks. However, when feeding from one of the direct burn stations, the lines are isolated from the sludge recirculation line so that material from the direct burn vessel or direct burn tanker will not enter the sludge tanks. Since the same flow metering and feed system is used for the direct burn vessel, the direct burn tanker, and the sludge feed from the tanks, only one of these may be in use at any given time.

Following off-loading of the direct burn vessel or direct burn tanker to the incinerator, the feed lines are flushed with an appropriate solvent to ensure incompatible materials do not mix and react and to ensure that ignitable materials do not enter the sludge recirculation line and the sludge storage tanks.

4.5.5 Direct Burn Compressed Gas Cylinder Feed System

The contents of compressed gas cylinders are fed to the incinerator from an enclosure located on the west end of the slag pad. This enclosure is open on the south side and has openings at the top and bottom of the east and west sides to facilitate natural ventilation. One rack of cylinders (20 cylinders) will be brought to this cylinder feed station at a time. One cylinder at a time is removed from its rack and placed upon a tipping mechanism mounted on a scale (lecture bottles will be secured in a vice on a separate smaller scale). If the cylinder contains a liquid, the cylinder will be tilted. The contents of the cylinder flow from the cylinder through a valve that stops flow should an automatic waste feed cutoff occur, through a control valve, and then to an eductor at the afterburner burner station. The eductor is powered by nitrogen and pushes the gas or liquid into the south afterburner burner port. The valving and tubing are sized to contain cylinder pressure.

When the cylinder is empty, as determined by the system vacuum reaching the dead head vacuum for the eductor operating at the set nitrogen pressure, nitrogen will be used to flush the cylinder and equipment. To flush an empty cylinder, the cylinder will be pressurized with plant nitrogen by closing the automatic valves, hooking up nitrogen before the valves and letting nitrogen enter until line pressure is reached. The nitrogen is then disconnected and the automatic valves opened, letting the eductor draw the flush nitrogen out of the cylinder until dead head vacuum is reached. This process is repeated at least three times. Water is also available for flushing empty cylinders. After flushing, the cylinder will be returned to the customer or the valve will be removed and the cylinder landfilled or recycled. Documentation will be maintained to show that each cylinder was appropriately flushed. This documentation will include the cylinder number (i.e., document and item number) the date and time the flushing was completed and the pressures/vacuum attained during flushing. The operator performing the flush will sign the documentation indicating that proper procedures were followed. Cylinders that have leaked until they are empty, either in the glove box or at a remote location on site, will also be flushed in similar fashion.

At the cylinder feed station, a glove box has been installed that will be used to manage leaking cylinders. The leaking cylinder or cylinders (if more than one, all cylinders must be compatible) are placed in the glove box and with the doors closed, an eductor will draw a vacuum of 1-2" w.c. on the glove box and exhaust it into the afterburner. Air or nitrogen (for flammable materials) will bleed into the box as needed to keep the vacuum setpoint. In the event of a waste feed cut-off while a leaking cylinder is in the glove box, nitrogen to the glove box eductor will continue to flow and the glove box will continue to be exhausted to the afterburner. The cylinder will remain in the glove box until it is empty and its contents are exhausted to the afterburner. The glove box will only be used in emergencies to manage leaking cylinders and will not be used routinely to empty cylinders.

4.5.6 Direct Burn From a Container

The glove box at the drum pumping station will hold up to four 55-gallon containers of compatible liquid. A pallet of containers, one pallet at a time, will be transferred from the drum pump storage area or another permitted storage area to the glove box at the drum pump station.

The door on the glove box, gasketed to prevent leakage, will be closed with air cylinders, the bung on a container opened and a lance placed in the opening. Tubes supplying nitrogen will also be placed in the opening of the container, if the container contains flammable liquid. During processing, an eductor draws 90 scfm from the glove box to the afterburner and a vacuum breaker in the side of the glove box will bleed air into the box in order to maintain a vacuum of 1" water column. Waste is pumped through the lance to a diaphragm pump and valves to the sludge port in the front wall of the kiln. The wetted parts of the pump are conductive Teflon and the piping and valves are Teflon-lined to assure compatibility with the wastes being processed. The lance is made of Hastelloy. A dampener is integrated into the pump to achieve the required turndown and smooth out pulsation.

When waste is pumped from the container to the front wall of the kiln, a flow meter records the amount of liquid being fed. When the container is empty, air, or when processing flammable liquids, nitrogen, passing through the meter will record a high value and the record keeping programming will stop recording. The empty container will then be tilted and flushed with an appropriate liquid.

Before pumping waste that is not compatible with the last waste pumped, the system will be flushed with an appropriate flushing liquid. The production engineer responsible for the job will choose the flushing liquid based upon the waste. Water and fuel oil are available at the drum pump station. Nitrogen is also available for drying the piping if necessary.

There is an LEL monitor inside the glove box that will alarm locally and at the control board when an LEL above 20% is sensed. The glove box is equipped with a CO_2 fire protection system and explosion relief panels with a detonation flame arrestor located in the vent piping just before the eductor. The pressure relief device in the piping will vent back to the glove box.

The system will handle materials that the International Fire Code classifies as flammable liquids, corrosive, toxic and highly toxic materials, and oxidizers.

4.5.7 Direct Burn Corrosive Feed System

The western half of the drive through area south of the slag pad is used for corrosive waste tankers or bulk liquid totes. A berm has been placed in the drive through to divide the eastern half (drive through direct burn station) from the western half (drive through corrosive direct burn station) and prevent incompatible spills from mixing.

A tanker truck or bulk liquid tote is placed in the drive through corrosive direct burn station. A Teflon (TFE) hose is used to connect the tanker/tote to the pump. A diaphragm pump is used to transfer waste through feed piping and into the south side of the afterburner. It will be fed to the afterburner through a fuel oil lance location (designated as A-106B-5 and located at the nine o'clock (west side) position on the burner can) that is no longer used for fuel oil. Fuel oil, blend liquid, or both will always be fed to the south afterburner burner whenever there is feed from the drive through corrosive direct burn system to ensure a stable flame in the burner.

The pump's wetted parts, piping and valves will be conductive Teflon lined. Conductive gaskets will be used to connect pipe and hose. A dampener will be used to achieve the required turndown and smooth out pulsation caused by the pump. A pipe tee and valving in the main line will allow the pump to be bypassed and waste feed to occur by pressurizing the tanker/tote should that be desired.

When waste is fed to the afterburner, a flow meter records the amount of liquid fed. When the tanker or tote is empty, air or nitrogen passing through the meter will record an abnormally high value, indicating that there is no longer any material being fed. The recordkeeping program will stop recording and the block valves will close. When liquid is present, the flow meter will record the amount of waste being fed.

The tanker/tote and the waste transfer/feed line will be flushed with an appropriate liquid after all waste has been fed from the tanker or tote. The Production Engineer responsible for the job will select the flushing fluid based upon the waste. Water and diesel fuel are available at the corrosive direct feed station. Nitrogen will also be available for drying piping.

5.0 Waste Tracking

5.1 Introduction

Waste will be tracked while on site so that its location is known at any time. Containers, with the exception of direct burn tankers that are accepted into the direct burn stations, will be tracked by a barcode label placed on each container and tracked in the plant wide database. The location of bulk wastes will be tracked in the plant wide database. All wastes managed on-site will be tracked in this system (hazardous as well as non-hazardous).

The current location of all waste will be maintained in the plant wide database. If there is a temporary problem with this computer system that does not allow the input of waste tracking data, wastes may still be moved and processed on-site provided the following occurs: The tracking of waste is accomplished through a manual tracking system designed to record the same information as the plant wide database, and the plant wide database is updated with the information accumulated on this manual tracking system as soon as the database is again functioning. The maximum time that this manual tracking system can be used as a substitute for the plant wide database is 24 hours for containers and 72 hours for bulk wastes and residues.

5.2 Container Tracking (Excluding Cylinders and Direct Burn Tankers)

The barcode is a label that is affixed to each container. It contains a number that is unique to that container from which information regarding the container can be found. Clean Harbors barcodes may already be on incoming containers if they have come from other Clean Harbors facilities. During the receiving process at the facility, a Clean Harbors Aragonite barcode label (designated with "AG") will be placed on all of the containers that have been manifested to the facility. Containers manifested to another facility that are stopping at the Aragonite facility for transfer operations will not receive an Aragonite barcode. Containers that have been accepted at the facility will have a green label or mark on the Aragonite barcode label. All containers in

permitted storage except the receiving areas (floor areas of buildings E-1 and E-5, bays 1 through 6 when in receiving mode, bulk solids/sludge pad and E-1, E-5, E-4 receiving docks) and transfer wastes in bays 1-6 will have the Aragonite barcode label and a green acceptance label or mark on the barcode label except as provided in section 5.2.1.

The green acceptance label or mark is placed on the barcode of each container only after the contents have been sampled and it has been determined that the waste will be accepted. Once the green acceptance label or mark is placed on the barcode label on the container, it is considered to have been accepted by Clean Harbors Aragonite. Each container is identified by a unique number, which is on the barcode affixed to the container. Container inventory is tracked by row, level, and space in building E-7, level three. Container inventory is tracked by row and space in buildings E-2 (except for row G), E-3, E-6, and E-7 (first two levels), building 68 (space only), buildings 69-North/South and in the truck unloading direct burn station. Container inventory is tracked by row in the E-1 and E-5 floor areas, bays 1 through 6, building E-2, row G, bulk solids/sludge pad, E-1, E-5, and E-4 receiving docks and in building E-4. The container buildings and other container storage areas are marked with each row having an assigned letter. Each location within a row where tracking to a space occurs is given a space number. Every container in the container management areas will use the barcode system. The plant wide database will be updated each time a container is moved to another location. When a row of containers is moved and scanned to another storage location, shipment off site, or further processing, Clean Harbors will confirm that waste tracking shows all of the containers that were moved in the new location(s) and that the row is empty before moving any new containers into that row.

The tracking number will be used to track the container in real time. The following is a description of the information fields required on the Clean Harbors Aragonite barcode label. Additional information (e.g., weight, acceptance date, profile information, generator, final destination, etc.) can be found by the tracking number in the waste tracking system.

Tracking Number:	Unique number used to identify each individual item.
Common Name:	Brief description of the material.
Profile:	Waste profile number assigned by Aragonite.
Processing Waste Class:	Waste processing class code assigned upon acceptance by Aragonite.
Hazard:	Hazards posed by the material in the container.
Constituents:	Hazardous constituents, based on either the profile or shipping papers that are assigned by the person centrally receiving the container into the Clean Harbors system, present in the waste.

Manifest: Manifest number and line number on the manifest.

Repacked and consolidated containers will be given a new barcode containing the information listed above. These containers will be identified in waste tracking. The histories of these drums as well as cross references to previous item numbers can be found from the item number in the waste tracking system.

The ability exists in the waste tracking system to "untrack" (UNTK) wastes. This removes tracking history from that container, and that history cannot be recovered. The ability also exists in the waste tracking system to "void" wastes. This removes the waste from the system so that the waste appears to have never existed. Prior to performing either of these actions, the tracking history and any other information that will be deleted will be copied and filed in the operating record, along with a memo explaining and justifying why the change was made. Containers that have inventory locations of "DWB" (i.e., they have been lost for some period of time) shall not be untracked to remove this history.

5.2.1 Barcode/Green Acceptance Label or Mark Exemption

The need can exist to unload a truck even though the receiving area is not cleared from a previous load. To accommodate this situation, Row A in E-2, E-3, E-6 and E-7 (see drawing D-800-M-402) is designated as a temporary (10 days or less) extension of the receiving area.

To identify the containers in temporary storage and subject to this exemption, each container in temporary storage (A rows) will be marked with the tracking number. All containers in a space (all three levels of a numbered area as indicated on drawing D-800-M-402) will have the same temporary storage date. A board near each A aisle will indicate the temporary storage date (the date first placed into temporary storage) for each space within that A row. If there is no date indicated for a particular space, the containers in that space will have an Aragonite barcode with a green acceptance label or mark on the barcode.

Containers in temporary storage will be kept closed and will be inspected at the same frequency as accepted containers. No container can remain in temporary storage longer than 10 days.

5.2.2 Lost Containers (DWB)

There may be times when a container is not in the location indicated by the waste tracking system. There are several different scenarios under which this may happen.

In some cases, a container that physically exists (or existed) cannot be located at the facility. In other cases, containers may be physically present at the facility, but the waste tracking system shows them as having already been processed (which could indicate that another container was processed incorrectly in its place). These discrepancies may be due to factors such as:

- Containers not properly scanned into their current locations,
- Containers processed (repacked, decanted, shredded, bulked, etc.) without proper documentation,

- Information from the processing logs was not entered, or was entered incorrectly, into the waste tracking system,
- Hardware or software malfunctions,
- Shipping the incorrect containers off site,
- Incorrect labeling, double barcodes, etc.

There are also cases where a container has been created in waste tracking that does not physically exist, and therefore cannot be located. Examples of this include:

- Several containers are created in waste tracking for a repack or consolidate job and not all of the containers are physically created, but the extras are not removed from the waste tracking system,
- Containers are manifested to Aragonite from another Clean Harbors facility (so they are already in the waste tracking system) but are not actually shipped.

Within one business day of discovery of such discrepancies, Clean Harbors Aragonite will update the waste tracking system by moving the container record to the "DWB" virtual location and begin efforts to locate the container or resolve the discrepancy. Different efforts may be used depending on the circumstances of how the container was lost, but may include:

- Visually inspecting the previously scanned location(s),
- Checking processing logs and forms (e.g., repack logs, feed logs, decant logs, etc.),
- Conducting additional plant-wide or area-wide scans,
- Contacting other Clean Harbors facilities or generators,
- Reviewing video records, etc.

A file for each container or group of containers that are placed in the DWB location will be maintained. All efforts to locate the missing containers or resolve the discrepancies will be thoroughly documented and the documentation maintained in this file.

If it can be determined and documented what happened to the container(s), the waste tracking system will be updated with the correct information and the resolution explained and placed in the appropriate file. Sufficient explanation and documentation will be provided as to what happened to the container and why the changes to waste tracking were made.

There may be times when it cannot be determined what happened to the container(s) at issue. When Clean Harbors Aragonite has exhausted all methods for resolving these discrepant containers, waste tracking may be updated to show the most likely disposition for these containers. The file will include a description of what research was done and why the decision was made to discontinue looking. Within 30 days of making this determination and updating the waste tracking system, Clean Harbors will notify the Director in writing, noting the tracking numbers of the containers and what actions were taken.

In order to discover these discrepancies and correct them in a timely manner, the entire container inventory will be scanned at least once per month.

When the tracking history is changed or corrected, it may involve removing erroneous processing or inventory records. This is referred to as "untracking." Other operations in waste tracking that may erase tracking history include "voiding" containers or "resetting" manifests. Prior to untracking any container or doing any of these other operations that permanently delete tracking history in the waste tracking system, the history will be recorded and preserved. "DWB" inventory locations will not be removed from the tracking histories.

5.3 Decant Tracking

When a container is decanted, the original weight of the container will already be recorded in the database. When the container is moved to the decant staging area (building E-4) the location will be updated in the database. The container will be weighed again after the decanting operation. The weight of the decanted liquid and its new location (e.g., T-305) will be entered into the database. If all of the material from the container is not transferred, the material remaining will continue to be tracked with the container.

5.4 Repack Tracking

The original container to be repackaged will already be in the database. When a container is moved into a workstation or the E-4 repack area, the location in the database is updated. It will show the repack workstation to where the container is moved (e.g., WS1, etc.). Unique repack barcode labels for the containers to which the material is repackaged are generated by the computer tracking system. The numbering system is generated by the computer tracking system and cross-references to the original container. When these new repack containers are created in the database, the system automatically assigns them the same location as the original container (e.g., WS1, etc.). The location of these containers is then updated when they are moved from the workstation to storage or other locations.

As repacking occurs, items from the original containers are transferred to the repack containers in the database so that there is an accurate accounting of the contents and weight in each repack container. The contents of the containers are also updated in the database to account for absorbents or other materials that are added to the containers.

5.5 Shredding Tracking

When the container to be shredded is moved to the shredding area, the location in the database is updated. Then, after shredding, the database is updated to show the material in the new location. Clean Harbors Aragonite personnel will manually log all transfers from the shredder to the bulk solids tank. This manual log is given to a support clerk by the end of the day. The material is then transferred to the appropriate bulk tank (i.e., T-404B-West) in the computerized waste tracking database.

5.6 Direct Burn Tracking

The direct burn vessels are not currently in use at the facility. Before putting the direct burn vessels back into use at the facility, Aragonite will provide information for the tracking of these containers and waste and that information will be used to update this section of the permit.

When a direct burn tanker is used, the location of the waste is identified as T-411 (for the drive through direct burn station) and T-413 or T-414 (for the truck unloading direct burn station) in the waste tracking system and the waste will be moved to the tank similar to incoming loads of bulk liquid that are off-loaded to the tank farm. The waste tracking location for the sludge pad direct burn station is identified as T-412. The waste tracking location for the drive through corrosive direct burn station is identified as T-415. The tracking of waste fed to the incinerator from a direct burn tanker is similar to wastes fed from the tank farm.

When a determination is made to decant to a direct burn tanker, containers to be decanted are transferred from their location in the storage buildings to a designated area within the secondary containment at the drive through direct burn tanker station. The waste tracking system is updated to show that the containers have been moved to the drive through direct burn tanker station (i.e., "T-411D1, T-411D2, or T-411D3"). When a direct burn tanker is filled, the waste is transferred from the original container to the direct burn tanker (T-411) in the waste tracking system similar to a container that is decanted to the tank farm.

5.7 Container Bulk-up Tracking

When containers of waste are bulked-up (i.e., placed into a bulk solids tank or the contents emptied into a bulk solids tank or the small sludge tank) a tracking system similar to that for shredding is employed. Clean Harbors Aragonite personnel will manually log all of these transfers. This manual log is given to a support clerk by the end of the day. The material is then transferred to the appropriate bulk tank (i.e., T-403) in the computerized waste tracking database.

5.8 Bulk Solids, Liquids, and Sludge Tracking

When bulk materials are accepted and unloaded, they are entered into the database by no later than the following business day. The location indicated would be the tank into which the material is unloaded. Each time a transfer is made (e.g., from one tank to another, from a tank to the incinerator, etc.) the database will be updated within the following two business days. The bulk liquid tanks and the sludge tanks use a "first in, first out" tracking system. The bulk solids tanks use a "last in, first out" tracking system. These systems are not applicable for tracking waste codes; these procedures are discussed in the Waste Analysis Plan.

On occasion, material from a tank is placed into containers or it may be held temporarily in a tanker before transferring it to another tank (e.g., from tank cleanouts, feed rate verification tests, etc.). The containers will be barcoded and placed into permitted storage or the tanker will be placed in the drive through direct burn station, the truck unloading direct burn station, the drive through corrosive direct burn station, the bulk solids/sludge pad, E-1, E-5 or E-4 receiving docks, or will be off-loaded into a different tank within 24 hours. The waste tracking system will be updated to show the new location of the waste. Also, if waste is transferred from one tanker to another, documentation will be maintained to show that transfer. The receiving tanker will be placed in the drive through direct burn station, the drive through corrosive direct burn station, the truck unloading direct burn station or another permitted bulk container storage area or will be off-loaded into a different tank within 24 hours.

5.9 Compressed Gas Cylinder Tracking

After cylinders have been off-loaded, they will be placed in racks with each rack having a capacity of twenty 9" diameter by 52" high cylinders. Each rack will contain cylinders with compatible materials.

The tracking number will be used to track the cylinder in real time and cylinder barcodes will contain the same information as those described in section 5.2. The Aragonite barcode label is placed on the cylinder during the receiving process. A green acceptance label or mark is placed on the barcode only after it has been determined that the waste will be accepted. Once the Aragonite barcode label is placed on the cylinder and a green acceptance label or mark is placed on the barcode, it is considered to have been accepted by Aragonite. The barcode label will be placed so that it can be seen without removing the cylinder from the rack. If any cylinders are moved to the cylinder storage area prior to acceptance, each cylinder will be marked with the tracking number and the rack will be clearly identified as having cylinders that are not yet accepted. Racks of cylinders will not be moved to the cylinder feed station until all cylinders on that rack have been accepted. Each cylinder is identified by a unique number that has been affixed to the cylinder. The cylinder storage area is divided into four quadrants based upon compatibility. Cylinder inventory is tracked by the quadrant and row and space where the rack of cylinders is located. Additionally, the cylinders will be tracked in other locations (i.e., in the cylinder feed station or one of the receiving buildings). The glove box and an isolated location onsite where leaking containers are managed are also identified as locations in the waste tracking system. Each time a rack of cylinders is moved or fed to the incinerator and individual cylinders moved to manage leaks, the waste tracking system is updated.

An operator will remove one rack at a time from the cylinder storage area and transport the rack to the cylinder feed station. Each rack will be fed as a job with the incineration chemistry being the same for all cylinders in a rack (using the worst-case chemistries from any cylinder on the rack). Before the first cylinder in a rack is fed, the job for that rack will be started by the control board operator. When the last cylinder in a rack has been fed, the job is stopped.

5.10 Drum Pumping Station

Containers that are fed directly to the incinerator through the drum pumping station will be moved by forklift from storage to the pumping station on the slag pad. They may also be staged or stored on the drum pumping storage pad prior to moving them to the drum pumping station. The drum pumping station and drum pumping storage locations are tracked in the waste tracking system as DRUMPUMP and DBSTO01 through DBSTO06.

Containers will be assembled into jobs with the incineration chemistry being the same for all of the containers on the job, using the worst-case chemistries from any container on the job. Before the first container on a job is fed, the control board operator will start the job for that container. This is done by selecting a virtual tank (SP01) where the chemistries for the job are stored as the source for the feed to that lance. When the last container on the job has been fed, the control board operator will stop the job.

After pumping, each container will be weighed. The weight of the container and its new location will be entered into the database. If all of the material was not pumped to the kiln, the material remaining will continue to be tracked with the container.

6.0 Emissions of Organic Vapors from Equipment Leaks

This section outlines the requirements for complying with the air emission standards for equipment leaks as established in 40 CFR 264 Subpart BB. The requirements include tagging and marking of affected equipment, inspecting and monitoring the equipment, repairing and reporting equipment leaks, and record keeping.

The regulated equipment includes any valve, pump, flange, grooved pipe connection, pressure relief device, or open ended valve that is in contact with gas, liquid, or sludge hazardous waste.

In order to eliminate the difficulty and expense of characterizing the organic content of the many waste streams processed at the facility, it will be assumed that all of the gas, liquid, and sludge waste have greater than ten percent organic content and all equipment is considered to be in light liquid service. Thus all equipment that is used for processing gas, liquid, or sludge waste is subject to these requirements. The physical state of all pumpable hazardous waste is considered to be liquid.

6.1 Equipment Tagging and Marking

All equipment subject to these requirements (described above) will be marked with a tag containing a unique equipment identification number. For most of these items the tag will be a weatherproof bar coded tag. These tags will also have the identification number in human readable form. Flanges that are covered by insulation must also be marked, either by bar coded tags, or by permanently marking the outside of the flange cover. These markings must be plainly visible. New or replaced equipment will also be marked as described above.

A weatherproof repair tag will be attached to any piece of equipment for which there is evidence of a leak (defined below). Each repair tag will be marked with the following information: the date the evidence of a leak was found (date suspected), the date that the leak was actually detected by monitoring (date detected), and the equipment Subpart BB identification number. The repair tag must be left in place before, during, and after repairs. It may be removed from any equipment item, except for valves, after the equipment repairs have been inspected. Repair tags for valves must remain on the valves until each valve has been monitored for two successive months without detecting any leaks.

6.2 Inspecting and Monitoring the Equipment

Monitoring in this section means testing with a VOC analyzer in accordance with EPA Method 21. Inspection shall mean a visual inspection for leaks. Leaks shall be defined as (1) hydrocarbon vapor monitor (HVM) instrument readings greater than 10,000 ppm, (2) visual indications of liquids dripping from a pump seal, or (3) physical evidence of leaking (visual, auditory, olfactory, or otherwise).

The pumps at the facility must be visually inspected weekly and monitored monthly. There are no alternative schedules for pump monitoring. Pumps must always be monitored each month regardless of how infrequently leaks are found.

Valves will be monitored on a monthly or quarterly basis. Initially, all valves shall be monitored monthly. For each valve that is not found to be leaking for two consecutive months, the monitoring frequency can be reduced to quarterly monitoring. An alternate frequency may be implemented upon notification of the Director as outlined below.

(1) If fewer than two percent of all the valves within a hazardous waste management unit have detectable leaks for at least two consecutive quarters, all of the valves in that hazardous waste management unit may be monitored on a semi-annual basis.

(2) If fewer than two percent of all the valves within a hazardous waste management unit have detectable leaks for at least five consecutive quarters, all of the valves in that hazardous waste management unit may be monitored on an annual basis.

If the percentage of valves for any hazardous waste management unit exceeds two percent after achieving any of these monitoring frequencies, then the monitoring frequency will revert back to monthly. If after reverting to monthly monitoring, the requirements are again met for the alternate frequencies, then Aragonite may again notify the Director of the facility's intent to comply with the alternate frequency.

There are conservation vents and rupture disks located on each tank farm tank and the large sludge tank. The conservation vents are vented through a closed vent system to a control device (afterburner or carbon canister system) as described in Attachment 14. The flanges around the rupture disks are marked. In the event that a rupture disk releases pressure, the disk will be replaced, and it will be monitored and achieve a standard of no detectable emissions (<500 ppm) within five calendar days of the pressure release.

There are currently no sampling connections in place at the facility. There are also no compressors at the facility that are in use with hazardous waste streams.

An open ended valve is any valve, except pressure relief valves, having one side of the valve seat in contact with the process fluid and one side open to the atmosphere, either directly or through an open pipe. All open ended valves that are connected to gas, liquid, or sludge hazardous waste piping must be fitted with a threaded cap or plug, which can be finger tight. The caps or plugs must be in place at all times except when necessary to open the valves during normal use of the equipment. As an alternative, a second valve may be installed in series. If a second valve is used, the first (inner) valve must be closed first and any hazardous waste allowed to drain or vent before the second (outer) valve is closed so that no process fluid is behind the second valve.

Scheduled monitoring of gasketed flanges, blind flanges, and grooved connectors is not required. If there is physical evidence of a leak, the flange or connector must be monitored within five days of such evidence being noted.

6.3 Repairing and Reporting Equipment Leaks

When leaks are found, the first attempt at repair (tightening packing nuts, etc.) must be initiated within five calendar days from the date the leak was found. The repairs must be completed within fifteen days of the discovery of the leak.

Repairs to leaking equipment can be delayed, provided that any of the following conditions are met:

(1) The repair is technically infeasible without shutting down the hazardous waste management unit. Repairs delayed for this reason must be completed before the end of the next scheduled hazardous waste management unit shutdown.

(2) The equipment is valved out and any hazardous waste is removed.

(3) For valves, the emissions resulting from the repair would be greater than the emissions resulting from delaying the repair. The purged material resulting from the repair must be collected and destroyed or captured in a control device.

(4) For valves, repairs beyond the next hazardous waste management unit shutdown are allowed if the valve must be replaced and valve supplies have been depleted (the valve assembly supplies must have been sufficiently stocked before they were depleted). This delay of repair past the next shutdown will not be allowed unless the next shutdown occurs sooner than six months after the first shutdown.

(5) Delays in repairs for pumps are allowed if the repair requires the use of a dual mechanical seal system that includes a barrier system, and the repair is completed as soon as possible but not later than six months from when the leak was detected.

Reports shall be submitted to the Director every six months and shall contain the following information: (1) the name, address, and EPA ID number of the Aragonite facility, (2) for any equipment discovered to be leaking and which was not repaired within the fifteen day limit, provide the identification number, the hazardous waste management unit location, a description of the piece of equipment, and the reason(s) for not completing the repairs within the required time, and (3) dates of any hazardous waste management unit shutdowns. If all repairs were completed within the required time frames, no report will be required.

6.4 Record keeping

A database will be maintained that includes all of the required equipment. It will include the equipment identification number, the type of equipment, the hazardous waste management unit to which it is related, dates of inspection or monitoring, the name or ID number of the inspector,

physical evidence of the leak (visual, sound, etc.), dates of leak detection, dates of first attempt at repair, and dates the repair was completed. Maintenance work orders will also be prepared and maintained to document the repairs made to the equipment. The identification numbers of all valves that are designated as either "difficult to monitor" or "unsafe to monitor" shall be entered into the database.

The approximate location of each piece of equipment will be shown on drawings to be maintained at the facility. These drawings and the database will be updated to reflect changes that are made to the equipment or piping. The equipment will be grouped into hazardous waste management units. These are defined by functional boundaries (i.e., kiln, front wall, south ABC, etc.)

The records shall include the dates of pressure release, repair dates, and monitoring results for rupture disks. For each pump, it will be specified which method of compliance will be used (either "monthly monitoring" or "equipped with dual mechanical seals"). If repairs to leaking equipment are delayed beyond fifteen days, the reason for the delay will be recorded as well as the expected date of repair. Documentation supporting the delay of repair of a valve beyond the next hazardous waste management shutdown shall be maintained. The statement and signature of the operator (or designee) who made the decision that a repair could not be made without a hazardous waste management shutdown shall also be maintained.

If either of the alternate frequencies for monitoring of valves has been chosen, all supporting documentation (e.g., letters to the Director, monitoring results, calculation of percentage leaking if there are any leaking, equipment lists by hazardous waste management unit, etc.) shall be maintained.

ATTACHMENT 10

DESIGN DRAWINGS

Attachment 10
Design Drawings

number	revision	title
D-034-PI-001	3	P&ID Legend Sheet 1 (unstamped)
D-034-PI-005*	17	Operating Interlock System, Sheet 1
D-034-PI-006*	11	Operating Interlock System, Sheet 2
D-034-PI-101	16	P&ID Slagging Rotary Kiln System
D-034-PI-102	16	P&ID Kiln Feed System
D-034-PI-103	6	P&ID Kiln Miscellaneous Systems
D-034-PI-105	25	P&ID Front Wall Burner Controls, Sheet 1
D-034-PI-106	30	P&ID Front Wall Burner Controls, Sheet 2
D-034-PI-107	19	P&ID Afterburner Controls, Sheet 1
D-034-PI-108	22	P&ID Afterburner Controls, Sheet 2
D-034-PI-109	9	P&ID Afterburner Controls, Sheet 3
D-034-PI-110	8	P&ID Deslagging System
D-034-PI-201	21	P&ID Spray Dryer Quench Tower
D-034-PI-202	14	P&ID Baghouse
D-034-PI-204	15	P&ID Saturator & Scrubber
D-034-PI-205	26	P&ID 1st Stage Neutralization System
D-034-PI-206	21	P&ID 2nd Stage Neutralization System
D-034-PI-207	8	P&ID Soda Ash Storage Handling System
D-034-PI-208	20	P&ID Spray Dryer Feed System
D-034-PI-209	8	P&ID Cooling Tower
D-034-PI-211	4	P&ID Wet Electrostatic Precipitator
D-034-PI-212	3	P&ID I.D. Fan and Stack
D-034-PI-213	7	P&ID Emergency Air/Water

number	revision	title
D-034-PI-214	5	P&ID Residue Handling Building
D-800-PI-215	4	Piping Diagram CEM System #1
D-800-PI-216	2	Piping Diagram CEM System #2
D-034-PI-220	2	Activated Carbon Silo
D-034-PI-221	3	PAC Dosing System Train 1
D-034-PI-222	3	PAC Dosing System Train 3
D-034-PI-300	6	P&ID Liquid Unloading Pumps
D-034-PI-301	12	P&ID Waste Liquid Transfer Pumps
D-034-PI-302-1	14	P&ID Direct Burn Waste Liquid Unloading
D-034-PI-302-2	1	P&ID Direct Burn Waste Liquid Unloading
D-034-PI-302-3	4	P&ID Sludge Pad Direct Burn Liquid Unloading
D-034-PI-303	3	P&ID Feed Tanks Sheet 1
D-034-PI-304	4	P&ID Feed Tanks Sheet 2
D-034-PI-305	4	P&ID Liquids Storage
D-034-PI-306	4	P&ID Liquids Storage
D-034-PI-307	7	P&ID Liquids Storage Tanks, PE Stamped 2/22/10
D-034-PI-308	6	P&ID Liquids Storage Tanks
D-034-PI-309	7	P&ID Liquids Storage Tanks, PE Stamped 2/22/10
D-034-PI-310	9	P&ID Liquids Storage Tanks
D-034-PI-313	4	P&ID Blend & Transfer Pumps
D-034-PI-314	5	P&ID Blended Liquid Feed & Transfer Pumps
D-034-PI-315	5	P&ID Aqueous Feed Pumps
D-800-PI-316	16	P&ID Hydrocarbon Vent System
D-800-PI-317	6	P&ID Vent System and Combustibles Analyzers
D-034-PI-318	1	P&ID Compressed Gas Waste

number	revision	title
D-034-PI-401	4	P&ID Solids Handling
D-034-PI-402	18	P&ID Sludge Handling
D-800-PI-408	5	Bldg. E-4 Decant P&ID
D-800-PI-410	23	P&ID Combustibles Monitoring System
D-800-PI-411	3	P&ID Comb. Air Carbon Adsorption System
D-034-PI-601	6	P&ID Fuel Oil/Outside Storage Tanks/Pumps, PE stamped 2/22/10
D-034-PI-602	5	P&ID Area Sumps Sheet 1
D-034-PI-603	12	P&ID Area Sumps Sheet 2
D-034-PI-604	6	P&ID Air Compressor System
D-034-PI-605	11	P&ID Nitrogen & Fuel Oil
D-034-PI-606	10	P&ID Plant, Instrument Air & Propane
D-034-PI-607	2	P&ID Plant Water, Runoff Water, Fire Water
D-034-PI-608	5	P&ID Potable Water
D-034-PI-609	14	P&ID Plant Water
D-034-PF-100	13	Overall Flow Scheme
D-800-PF-275	1	Process Flow Diagram – Typical December 1997
D-800-PF-276	1	Process Flow Diagram – Typical December 1997
D-034-PF-301 Sheet 1 of 2	12	Liquids Handling (Tank Farm) - Flowsheet
D-034-PF-301 Sheet 2 of 2	7	Liquids Handling (Tank Farm) - Flowsheet
D-034-PF-302	12	Direct Burn & Cylinder Material Handling - Flowsheet
D-034-PF-401	6	Process Flow Diagram - Barrel Handling
D-034-PF-402	9	Sludge and Bulk Solids Handling - Flowsheet
D-034-PF-603	10	Closed Vent System Flowsheet
D-034-PF-604	9	Hydrocarbon Vent System Flow Diagram
D-034-M-001	2	Site Plan

number	revision	title
D-034-M-002	23	Plot Plan
D-034-M-002-SP	16	Sump and Sump Pump Location
D-034-M-005	17	Safety Equipment Plan
D-800-M-122	1	Direct Burn Vessel
D-034-M-401	0	Cylinder Storage Area Plot Plan
D-800-M-402	4	Container Storage Building Plan
D-800-M-403	1	Material Handling Area Plan
SK-090-997-AR	3	Area Site Plan

* NOTE: These drawings include interlocks that are not required by this permit. They are required by other permits and are included in these drawings to avoid the confusion caused by two sets of interlock drawings.

ATTACHMENT 10

DESIGN DRAWINGS

Attachment 10
Design Drawings

number	revision	title
D-034-PI-001	3	P&ID Legend Sheet 1 (unstamped)
D-034-PI-005*	17	Operating Interlock System, Sheet 1
D-034-PI-006*	11	Operating Interlock System, Sheet 2
D-034-PI-101	16	P&ID Slagging Rotary Kiln System
D-034-PI-102	16	P&ID Kiln Feed System
D-034-PI-103	6	P&ID Kiln Miscellaneous Systems
D-034-PI-105	25	P&ID Front Wall Burner Controls, Sheet 1
D-034-PI-106	3029	P&ID Front Wall Burner Controls, Sheet 2
D-034-PI-107	19	P&ID Afterburner Controls, Sheet 1
D-034-PI-108	22	P&ID Afterburner Controls, Sheet 2
D-034-PI-109	9	P&ID Afterburner Controls, Sheet 3
D-034-PI-110	8	P&ID Deslagging System
D-034-PI-201	21	P&ID Spray Dryer Quench Tower
D-034-PI-202	14	P&ID Baghouse
D-034-PI-204	15	P&ID Saturator & Scrubber
D-034-PI-205	26	P&ID 1st Stage Neutralization System
D-034-PI-206	21	P&ID 2nd Stage Neutralization System
D-034-PI-207	8	P&ID Soda Ash Storage Handling System
D-034-PI-208	20	P&ID Spray Dryer Feed System
D-034-PI-209	8	P&ID Cooling Tower
D-034-PI-211	4	P&ID Wet Electrostatic Precipitator
D-034-PI-212	3	P&ID I.D. Fan and Stack
D-034-PI-213	7	P&ID Emergency Air/Water

number	revision	title
D-034-PI-214	5	P&ID Residue Handling Building
D-800-PI-215	4	Piping Diagram CEM System #1
D-800-PI-216	2	Piping Diagram CEM System #2
D-034-PI-220	2	Activated Carbon Silo
D-034-PI-221	3	PAC Dosing System Train 1
D-034-PI-222	3	PAC Dosing System Train 3
D-034-PI-300	65	P&ID Liquid Unloading Pumps
D-034-PI-301	12	P&ID Waste Liquid Transfer Pumps
D-034-PI-302-1	14	P&ID Direct Burn Waste Liquid Unloading
D-034-PI-302-2	1	P&ID Direct Burn Waste Liquid Unloading
D-034-PI-302-3	4	P&ID Sludge Pad Direct Burn Liquid Unloading
D-034-PI-303	3	P&ID Feed Tanks Sheet 1
D-034-PI-304	4	P&ID Feed Tanks Sheet 2
D-034-PI-305	4	P&ID Liquids Storage
D-034-PI-306	4	P&ID Liquids Storage
D-034-PI-307	7	P&ID Liquids Storage Tanks, PE Stamped 2/22/10
D-034-PI-308	6	P&ID Liquids Storage Tanks
D-034-PI-309	7	P&ID Liquids Storage Tanks, PE Stamped 2/22/10
D-034-PI-310	9	P&ID Liquids Storage Tanks
D-034-PI-313	4	P&ID Blend & Transfer Pumps
D-034-PI-314	5	P&ID Blended Liquid Feed & Transfer Pumps
D-034-PI-315	5	P&ID Aqueous Feed Pumps
D-800-PI-316	165	P&ID Hydrocarbon Vent System
D-800-PI-317	6	P&ID Vent System and Combustibles Analyzers
D-034-PI-318	1	P&ID Compressed Gas Waste

number	revision	title
D-034-PI-401	4	P&ID Solids Handling
D-034-PI-402	1~~8~~7	P&ID Sludge Handling
D-800-PI-408	5	Bldg. E-4 Decant P&ID
D-800-PI-410	2~~3~~3	P&ID Combustibles Monitoring System
D-800-PI-411	3	P&ID Comb. Air Carbon Adsorption System
D-034-PI-601	6	P&ID Fuel Oil/Outside Storage Tanks/Pumps, PE stamped 2/22/10
D-034-PI-602	5	P&ID Area Sumps Sheet 1
D-034-PI-603	12	P&ID Area Sumps Sheet 2
D-034-PI-604	6	P&ID Air Compressor System
D-034-PI-605	11	P&ID Nitrogen & Fuel Oil
D-034-PI-606	10~~8~~9	P&ID Plant, Instrument Air & Propane
D-034-PI-607	2	P&ID Plant Water, Runoff Water, Fire Water
D-034-PI-608	5	P&ID Potable Water
D-034-PI-609	1~~4~~3	P&ID Plant Water
D-034-PF-100	13	Overall Flow Scheme
D-800-PF-275	1	Process Flow Diagram – Typical December 1997
D-800-PF-276	1	Process Flow Diagram – Typical December 1997
D-034-PF-301 Sheet 1 of 2	12	Liquids Handling (Tank Farm) - Flowsheet
D-034-PF-301 Sheet 2 of 2	7	Liquids Handling (Tank Farm) - Flowsheet
D-034-PF-302	12	Direct Burn & Cylinder Material Handling - Flowsheet
D-034-PF-401	6	Process Flow Diagram - Barrel Handling
D-034-PF-402	9	Sludge and Bulk Solids Handling - Flowsheet
D-034-PF-603	10	Closed Vent System Flowsheet
D-034-PF-604	9	Hydrocarbon Vent System Flow Diagram
D-034-M-001	2	Site Plan

number	revision	title
D-034-M-002	23	Plot Plan
D-034-M-002-SP	16	Sump and Sump Pump Location
D-034-M-005	17	Safety Equipment Plan
D-800-M-122	1	Direct Burn Vessel
D-034-M-401	0	Cylinder Storage Area Plot Plan
D-800-M-402	4	Container Storage Building Plan
D-800-M-403	1	Material Handling Area Plan
SK-090-997-AR	3	Area Site Plan

* NOTE: These drawings include interlocks that are not required by this permit. They are required by other permits and are included in these drawings to avoid the confusion caused by two sets of interlock drawings.

ATTACHMENT 14

FUME MANAGEMENT

Attachment 14
Fume Management

Table of Contents

1.0 Introduction 1
2.0 Closed Vent System 1
2.1 Bulk Solids Building 2
2.2 Shredder 3
2.3 Apron Feeder 4
2.4 Small Sludge Tank 4
2.5 Backup Carbon Adsorption System 5
3.0 Hydrocarbon Vent System 6
3.1 Liquid Tank Farm 7
3.2 Decant Operations/Direct Burn Vessel/Direct Burn Tanker/Corrosive Feed Direct Burn Tanker/Tanker to Tanker Transfer 7
3.3 Large Sludge Tank 8
4.0 Other Vent Systems 8
4.1 Carbon Systems 8
4.1.1 Repack Operations 8
4.1.2 Decant Operations 9
4.2 Discharge to Atmosphere 9
4.2.1 Container Storage and Staging 9
4.2.2 Tanker Unloading 9
4.2.3 E-5 Fingerprint 9
4.3 Vents to Incineration System 9
Table 1 -- NDOs During Normal Operations 11
Table 2 -- NDOs During Backup Operations 12

1.0 Introduction

This attachment addresses the management of fumes as mandated by RCRA and the Division of Solid and Hazardous Waste. There are two separate and distinct fume systems associated with the incinerator: the closed vent system (i.e., the combustion air system and the backup carbon adsorption system) and the hydrocarbon vent system. Each will be addressed below with their components outlined. Analyzers and interlocks described below are detailed on drawings D-800-PI-316, D-800-PI-317, D-800-PI-410, and D-800-PI-411 in Attachment 10. There are also other vent systems for other storage and processing operations at the facility. These are discussed in section 4.

2.0 Closed Vent System

The closed vent system (i.e., the combustion air system and the backup carbon system) collects ventilation air from sources that handle waste in the aggregate with greater than 140°F flash point (or, in the case of the direct burn tanker vacuum decant operations, the vent gas is diluted to below 60% LEL prior to entering the closed vent system). These sources include the bulk solids building, the shredder, the apron feeder, the small sludge tank, and the direct burn tanker vacuum pump. The destination of these fumes is to the combustion air fans under normal operating conditions. When the combustion air fans are off, or whenever the ABC temperature is lower than 1400°F for more than ten minutes, the fumes report to the backup carbon adsorption system (described in section 2.5).

The air ventilated from these sources is always exhausted either through the combustion air system to the incinerator or to the backup carbon system. During normal operations, the bulk solids building, the shredder, the apron feeder, the small sludge tank, and the diluted vent gas from the direct burn tanker vacuum decant operations (when operating) will be vented to the kiln and ABC and the backup carbon adsorption system will be isolated. During backup operations (when the combustion air fans are off or when the ABC is operating at a temperature less than 1400°F for more than ten minutes) the bulk solids building, shredder and small sludge tank will be vented to the carbon adsorption system, and the kiln and ABC will be isolated from these sources and will draw combustion air from the 48 inch plenum through the atmospheric vents. The vent from the apron feeder will be closed (i.e., damper HV4050 will be closed) and any venting of this device will be through the bulk solids building to the carbon adsorption system. The direct burn tanker vacuum decant operations will not occur during backup operations.

Inspection ports are located in the kiln and ABC combustion air ducts. These will be checked for dusting and liquid accumulation at least once per week. In-line LEL instruments monitor the ducts (north and south side of kiln combustion air duct, and north and south ABC combustion air ducts) to determine hydrocarbon levels. The LEL instruments are tied to the control computer (WDPF). The process flow is shown in drawing D-034-PF-603 in Attachment 10. The combustion air system and the backup carbon system are shown in drawings D-800-PI-410, and D-800-PI-411 in Attachment 10. The liquid trap for the vacuum decant system in the drive through direct burn station is equipped with a high level sensor, which will alarm locally and in

the control room when the liquid level reaches one foot. The operator will then stop the vacuum decant system and drain the liquid from the trap.

The closed vent system between the bulk solids building, the shredder, the apron feeder, the small sludge tank and the inlet to the ID fans (both kiln/ABC combustion air fans and the carbon adsorption system ID fan) will be operated at below atmospheric pressure. It will have at least one magnehelic pressure gauge installed in the vent system to verify a draft condition in the combustion air ductwork. There will be a flow switch in the combustion air ductwork that will generate a digital signal that will be recorded in Wonderware that can also be used to verify that the closed vent system is operated at a pressure less than atmospheric. The duct work sections between the carbon adsorption system ID fan (K-401) and the carbon adsorbers, between the combustion air fans (K-101 and K-102A/B) and the incinerator, and between the vacuum pump dilution air fan (K-407) and the combustion air plenum will be operated at a positive pressure. These sections of the vent system will be monitored annually to ensure that there are no VOC emissions greater than 500 ppm above background.

2.1 Bulk Solids Building

Dirt and debris are typical waste in bulk solids. Air is drawn from the bulk solids building by the combustion air fans during normal plant operations. The vent system consists of ducting from bulk solids to the air plenum that reports to combustion air fans. The system is activated whenever the combustion air fans are on and the temperature in the ABC is greater than 1400°F. In-line LEL instruments monitor the duct to determine hydrocarbon levels. The LEL instruments are tied into the kiln's control computer, the WDPF. Inspection ports in the ducting must also be checked for dusting and liquid accumulation at least once per week.

When the combustion air fans are off, or whenever the ABC temperature is lower than 1400°F for more than ten minutes, the fumes report to the backup carbon adsorption system.

The bulk solids building and associated vents will serve as the enclosure that is vented through a closed vent system to an enclosed combustion control device (or to the backup carbon adsorption system) in order for the bulk solids tanks to comply with Tank Level 2 controls specified in 40 CFR§264.1084(d)(5). The bulk solids building shall be operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T -- Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR§52.741, Appendix B. Testing to demonstrate that the bulk solids building meets these criteria will be done initially, and annually thereafter.

Tables 1 and 2 list the natural draft openings (NDOs) that are allowed in the bulk solids building during normal and backup operations respectively. Clean Harbors Aragonite will maintain the surface area of each of the NDOs at or below the specifications given in Table 1 (during normal operations) or Table 2 (during backup operations). However, in order to allow for time to seal openings for backup operations, the NDOs listed in Table 1 may be in place for periods of up to four hours while venting to the backup carbon adsorption system.

The doors to the bulk solids building must remain closed except when unloading waste into the tanks, managing waste with external equipment, emergencies, and maintenance activities. Doors must be closed as soon as possible (at least within 15 minutes) after unloading a truck or performing other activities for which the doors must be opened.

During normal operations, a minimum flow of 5300 acfm will be vented from the bulk solids enclosure at all times to maintain the required minimum flow velocity through the NDOs. Since this air combines with vent gas from the direct burn tanker vacuum pump and dilution air prior to being measured, the following will be implemented. The dilution air fan, damper, or both will be configured to produce a maximum total flow of 5225 acfm to the combustion air plenum. This will be documented by manual measurements prior to operation, and the same configuration will be maintained during operation. To ensure a minimum flow from the bulk solids enclosure, the flow of combustion air will be maintained above 12,000 acfm when the vacuum pump/dilution air fan are operating and above 6775 acfm when they are not operating. This flow will be determined based on the combined flow measured by flow meters FIT1143, FIT1192, FIT1247, and FIT1015. Should there be a malfunction with one or more of these flow meters, four hours will be allowed for repair. These flows will be monitored and recorded at all times the fumes are being directed to the incinerator. The atmospheric air vents (HV4018 and HV4025) will be closed during normal operations. However, during emergency situations, HV4018 will modulate, if necessary, to maintain the LEL of the highest of sensors AIT4018A, B, C, or D below 25%. Any time HV4018 is not closed during normal operations will be recorded in the Wonderware archiving system. The required minimum flow during backup operation will be determined by annually measuring the volumetric flow, corrected to standard conditions, by EPA Method 2 as required by "Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR§52.741, Appendix B. An anemometer may be used in place of the pitot tube for determining the flow in the ducts. The carbon adsorption ID fan and dampers will have the same configuration during operation as during the most recent test. The minimum required flow, along with the documentation supporting this value, will be submitted to the Director within fourteen days of completing the test.

2.2 Shredder

The shredder is located in the bulk solids building. In-line LEL instruments monitor the duct to determine hydrocarbon levels. The LEL instruments are tied into the WDPF. Inspection ports in the ducting must also be checked for dusting and liquid accumulation at least once per week.

The shredder is vented to the incinerator through the combustion air system during normal operations. During backup operations (when the combustion air fans are off or when the ABC is operating at a temperature less than 1400°F for more than ten minutes) the shredder will be vented to the carbon adsorption system. Damper HV4017 will be maintained between 5 and 25% open.

2.3 Apron Feeder

The apron feeder conveys material from bulk solids to the kiln. Air is drawn from the apron feeder to the combustion air system during normal operations.

The apron feeder, which is connected to the bulk solids building, does not function as part of the enclosure for the bulk solids tanks. Rather, the apron feeder chute and dribble chute openings function as NDOs for the bulk solids building. When the backup carbon adsorption system is in operation, the apron feeder chute and dribble chute will be sealed as indicated in Table 2. To minimize air emissions, Clean Harbors Aragonite will seal the apron feeder openings as much as is feasible.

The material from the apron feeder drops through a double set of flop gates before entering the kiln. To isolate the kiln from the apron feeder, only one set of flop gates is open at once. To further isolate the kiln from the apron feeder, a slide gate is located below the bottom flop gates. The slide gate only opens to allow the bottom flop gates to drop the material into the kiln. The chamber between the flop gates is equipped with a nitrogen purge system. This system is used when feeding material that has a potential of catching fire before entering the kiln. When the material is between the flop gates, the chamber is purged with nitrogen so that the heat from the kiln will not ignite the material.

2.4 Small Sludge Tank

The small sludge tank (T-406) is a 5549 gallon tank used for receiving sludge waste from tankers and from other containers. The sludge material must have a flash point greater than 140°F, and must not be reactive. This tank has a large hinged door that covers a grizzly type grating for straining the sludge, and a smaller door for adding material from containers. Material from the large sludge tank (T-401) can be added to the tank via hard piping or a hose. This tank is vented to the incinerator through the combustion air system during normal operations. During backup operations (i.e., when the combustion air fans are off or the ABC temperature drops below 1400°F for more than ten minutes), the ventilation duct damper (HV4023) will remain open and the tank will be vented to the backup carbon adsorption system.

In-line LEL instruments monitor the hydrocarbon levels in the duct. The LEL instruments are tied to the WDPF. Inspection ports in the ducting must also be checked for dusting and liquid accumulation at least once per week.

The tank will comply with the Tank Level 2 controls specified in 40 CFR§264.1084(d)(3). Except when adding waste through the doors to the tank, all doors will be closed. They will be maintained so that there are no visible cracks, holes, gaps, or other open spaces. The doors must be closed as soon as possible (at least within 15 minutes) after unloading a truck or container into the tank. When it is necessary to add waste to the tank through the large tank lid, it should be maintained as closed as possible during the operation.

2.5 Backup Carbon Adsorption System

The carbon adsorption system includes an ID fan (K-401) that maintains the required draft to provide the necessary face velocity across the NDOs in the bulk solids building to capture VOCs and transport them to the carbon adsorbers. An in-line particulate filter prevents dust from clogging the carbon adsorber beds. The carbon adsorption system will vent fumes from the bulk solids building, the shredder, and the small sludge tank when it is in operation. The vent from the apron feeder will be closed and any venting of the apron feeder will be through the bulk solids building.

The carbon adsorption system will be in use during planned maintenance activities and during emergency or unplanned maintenance activities where the ABC temperature is reduced to less than 1400°F for more than ten minutes or when the combustion air fans are off.

The backup carbon adsorption system includes two single stage carbon adsorbers in a parallel arrangement that are operated one at a time. The unit that is in use is the primary backup unit. The unit that is not in use will serve as a secondary backup. The unit serving as the secondary backup will be placed on-line before the carbon in the primary backup unit becomes exhausted. The exhausted carbon will be replaced in the primary unit and that unit will then serve as the secondary backup.

Each carbon adsorber will be filled with 4000 pounds of activated carbon. Each has a bed depth of 2.8 feet and a volume of 133 cubic feet. The type of carbon to be used will meet or exceed the requirements of the following specifications:

For reactivated carbon -- Calgon vapor phase react carbon (VPR 4x6 - 4x10)
For virgin carbon -- Calgon vapor phase BPL 4x6 - 4x10 carbon

The carbon will be replaced on a regular predetermined time interval that is less than the design carbon replacement interval based on the flow rates and VOC concentrations in the closed vent system. Only the hours that the carbon is actually in use are counted for determining when the carbon will be replaced. The actual number of hours that each carbon adsorber is in use (as well as which time period it is in) will be recorded in Wonderware. If a carbon adsorber is used during both time periods (summer as well as other months) the time used will be prorated for each time period (e.g., if reactivated carbon with a summer replacement interval of 528 hours and a replacement interval of 888 hours for all other months were used for 264 hours during the summer and the rest of the time during the other months, the carbon would need to be changed after being used for 444 hours in the other months). June, July, and August are designated as summer months.

The spent carbon will be managed as a hazardous waste. Records of the dates the carbon is removed, placed into permitted storage, and treated will be maintained in the operating record.

The carbon adsorbers will be equipped with CO detectors for monitoring for hot spots in the carbon bed. The carbon adsorbers will be maintained in an inert nitrogen atmosphere while not in use. When idle, the carbon adsorbers will be isolated with dampers at the inlet and outlet (stack) to maintain the inert atmosphere and to minimize VOC emissions.

The carbon adsorption system ID fan and dampers will be configured to maintain the minimum required flow from the bulk solids enclosure as explained in section 2.1. Following each verification of the Procedure T enclosure using the backup carbon adsorption system, the appropriate carbon replacement intervals will be determined (based on the flow necessary to maintain the criteria for the permanent total enclosure and any changes in the VOC concentrations in the closed vent system). Any changes to the system that requires a higher flow rate than was previously determined will not be made until new carbon replacement intervals have been calculated and programmed into the system.

Aragonite will periodically measure the VOC concentrations in the closed vent system by sampling the exhaust at a location before the backup carbon units and analyzing the gas contents to verify that they remain similar to those used in the design analysis. These measurements shall be made at least annually and whenever requested by the Director. If the periodic readings indicate that the VOC levels are higher than those used in the previous calculation of the carbon replacement interval, the carbon replacement interval will be recalculated and programmed into the system. Similarly, if the periodic readings indicate that the VOC levels are lower than those used in the previous calculation of the carbon replacement interval, the carbon replacement interval may be recalculated and programmed into the system.

The carbon replacement intervals (for both reactivated and virgin carbon during both summer and non-summer months) along with any supporting documentation (e.g., flow rate measurements, VOC measurements, etc.) and calculations will be certified by a Utah licensed professional engineer and submitted to the Director within fourteen days of making any change to the carbon replacement interval.

3.0 Hydrocarbon Vent System

The hydrocarbon vent system collects fumes from nitrogen blanketed storage tanks and from processing units that may handle waste with a flash point less than 140°F. Normal operation is to collect fumes via piping or ducting and direct those fumes to the afterburner chamber. A blower and nozzle rated for pre-mixed fuel-air service will be used to input the fumes directly into the afterburner (ABC). In accordance with NFPA, a flame arrestor will separate the collection system from the ABC. The pre-mix blower and an air inlet valve will insure minimum flow velocity at all times to prevent flashback.

A second part of the hydrocarbon system is carbon canisters. These 55-gallon canisters are filled with carbon. There are primary and secondary carbon canister systems. The four primary canisters are sized to handle normal flow rates and the secondary canisters are sized to handle

peak flow rates. Each system consists of a first-stage and second-stage contact of the vent air with carbon. The canisters can be used either in conjunction with the pre-mix blower or independent of the blower. The canisters are used on these occasions:

a) when there is excess flow rate, as determined by overpressure in the hydrocarbon vent system;
b) when the pre-mix blower, K-104, is off;
c) when the ABC temperature is less than 1400°F;
d) when ABC O_2 is less than 2%; or
e) when any combination of these conditions exists.

The process flow is shown in drawing D-034-PF-604.

Temperature is monitored in the carbon system. Piping is installed to allow manual flooding on the carbon canisters with nitrogen if the temperature approaches auto ignition.

When fumes are directed to the carbon canisters, the fumes are monitored with a PID or equivalent every three hours. The sample ports are shown on drawing D-800-PI-316 in Attachment 10. Readings are taken from both primary and secondary headers and recorded on a logsheet at preset three hour intervals. A reading of 100 ppm or greater will indicate breakthrough. Aragonite will immediately replace (not to exceed 30 minutes) any carbon adsorption canisters in which breakthrough has occurred.

Condensation traps are also part of this system. The condensation traps are equipped with level sensors that alarm to the WDPF when approximately 1/3 full. The traps will also be manually checked for liquid accumulation at least once per week. The following sources are part of the hydrocarbon system.

3.1 Liquid Tank Farm

The twelve storage and four blend tanks report to the hydrocarbon vent system. All tanks are under a nitrogen blanket.

3.2 Decant Operations/Direct Burn Vessel/Direct Burn Tanker/Corrosive Feed Direct Burn Tanker/Tanker to Tanker Transfer

The decant process is located in the decant building inside of E-4, container processing. Containers of liquids are decanted via the use of either a vacuum pump or a diaphragm pump to pull liquids from the container and transfer that liquid directly to the tank farm or a direct burn vessel. Air and vapors displaced by the vacuum pump or from the tank or vessel are directed to the hydrocarbon vent system.

Decanting of containers may also occur in the drive through direct burn station. Liquids are transferred from a container to a tanker by using the vacuum pump on the tanker. When the vacuum pump is used, the vacuum exhaust will be mixed with dilution air and directed to the

closed vent system as described above in Section 2. When the backup carbon adsorption system is being used, no vacuum pump decanting from a container to a tanker occurs.

The direct burn vessel can be off-loaded by moving it to the truck unloading building and off-loading the material to the tank farm, or by pressurizing the vessel in building E-4 with nitrogen and forcing the liquid to the tank farm through the decant header, or the vessel can be moved to the direct burn pad or the sludge pad station and off-loaded to the incinerator with nitrogen pressure. Following off-loading of a direct burn vessel or direct burn tanker, any compressed nitrogen in the vessel or tanker will be relieved through the hydrocarbon vent system. Nitrogen and vapors displaced from filling a tanker during a tanker to tanker transfer are also directed to the hydrocarbon vent system.

The corrosive waste feed system can be off-loaded by pressurizing the tanker/tote with nitrogen, by pumping, or both. Following the off-loading of the corrosive waste tanker/tote, any compressed nitrogen in the tanker/tote will be relieved through the hydrocarbon vent system.

3.3 Large Sludge Tank

The large sludge tank (T-401), is tied into the hydrocarbon vent system. This tank is nitrogen blanketed.

4.0 Other Vent Systems

There are other vent systems at Aragonite where waste is stored, sampled, or both, but are not part of either the combustion air or the hydrocarbon system. There are three types of these systems: those that pass through a carbon system prior to discharge to the atmosphere, those that discharge directly to the atmosphere, and those that vent to the incineration system.

4.1 Carbon Systems

Carbon filters exist on the vent systems in the E-4 decant area, the E-4 repack area, and the E-2 repack area. Weekly inspections are conducted on each of the carbon filters. The inspection consists of checking to see if the carbon is free of impediments, verifying operability of the vent system, checking the carbon level, and checking for organic saturation. Saturation will be determined once a week by venting a container with volatile organic liquid and measuring the hydrocarbon concentration exiting the filters with a PID or equivalent. The carbon will be removed and ultimately incinerated when the reading goes over 500 ppm. These inspections will be documented and the log sheets will contain the area, date, inspectors name, material removed, operational status, carbon level, and hydrocarbon concentration. If carbon changeout is required, documentation that it was changed will also be provided. The profile number of the waste being vented through the system at the time of the inspection will also be noted on the inspection form.

4.1.1 Repack Operations

Repack operations occur at the three workstations in building E-2 and the repack area in building E-4. Each workstation and the E-4 repack area is supplied with point source ventilation for the

capture of fumes from the repack operations. No container processing will occur at a workstation or the E-4 repack area unless the ventilation system for that particular area is operating. In order to ensure adequate capture velocities, any container that is open in the workstations will be no more than 3 feet from the ventilation hood in workstation 3 or no more than 2 feet from the ventilation hood in workstations 1 or 2. This requirement is only applicable for lab packs when the inner container(s) are opened. The ventilation air from each workstation is pulled by a fan located external to E-2 on the west side of the building. The air from the fan passes through carbon filters before being discharged to the atmosphere. For the E-4 repack area, a fume exhauster is used to pull air from the work room's area to a carbon filter and then to a roof ventilator on top of building E-4.

4.1.2 Decant Operations

The container decant room is in the container processing building, E-4. Liquid is removed from containers and pumped to either the tank farm or a direct burn vessel. A fume exhauster pulls across the top of a drum while liquid is removed to the tank farm or to a direct burn vessel. The ventilation of the fumes is to a carbon filter and then to atmosphere at the roof of E-4.

4.2 Discharge to Atmosphere

4.2.1 Container Storage and Staging

Container storage occurs in the buildings designated as E-1, E-2, E-3, E-4, E-5, E-6, E-7, 68, and 69-North/South. Staging containers for processing (feed to the kiln, repacking, decanting, shredding, or any combination thereof) occurs in building E-4.

Fumes are not expected in these areas since containers are kept closed. The buildings have ventilation systems designed to meet the air exchanges specified in the Uniform Building Code (UBC).

4.2.2 Tanker Unloading

The tanker unloading building ventilation meets Uniform Building Code requirements for air exchanges. Waste is exposed to atmosphere only when a sample of the truck load is taken. Pumps are used to unload liquid tankers. The contents of these tankers report to the liquid tank farm.

4.2.3 E-5 Fingerprint

Anytime there are waste samples/chemicals present in an E-5 fingerprint area fume hood, the fume hood is exhausted to the atmosphere above E-5. The fume hoods in the E-5 fingerprint area meet all applicable NFPA requirements.

4.3 Vents to Incineration System

The chute of the deslagger is vented back to the ABC to minimize the release of steam and other emissions. A duct leads from the top of the deslagger chute to the ABC and fumes are drawn into the incinerator by the fan in the duct. Two eductors vent to ports in the south side of the

afterburner. The first is the vent from the top of the glove box in the cylinder feed station. An eductor draws a vacuum of 1-2" WC on the glove box and exhausts it to the afterburner. This glove box is only used during emergencies to manage leaking cylinders and will not be used routinely to empty cylinders. A second eductor vents the drum pumping station glove box. Compressed air to the eductor draws a vacuum of 1" WC in the glove box. If compressed air to the eductor cannot be maintained, the system will automatically switch to nitrogen to continue venting the glove box.

Table 1 -- NDOs During Normal Operations

Opening Description	Location Description	Dimensions of NDO	Size (in^2)	Comments
North Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
Middle Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
South Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
North Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
Middle Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
South Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
Man door 3'x7' (shredder feed chute)	4th floor, west side	⅛" x 17'	25.5	Gap around door
Man door 3'x7' (shredder feed chute)	4th floor, west side	⅛" x 3'	4.5	Gap under door
Man door 3'x7' (crane bay)	5th floor, south side	⅛" x 17'	25.5	Gap around door
Man door 3'x7' (crane bay)	5th floor, south side	⅛" x 3'	4.5	Gap under door
Shredder Camera Opening	Inside west 2nd floor double doors, west side of shredder	6" x 6"	36	Opening into shredder
Shredder Camera Light Opening	Inside west 2nd floor double doors, west side of shredder	6" x 6"	36	Opening into shredder
Shredder Side Access Door	Inside west 2nd floor double doors, east side of shredder	4 x 36" x ¼"	36	Gaps around door edges
Shredder Side Access Door	Inside west 2nd floor double doors, east and west side of shredder	4 x (9" + 32") x ¼"	0	2 doors @ 9" x 32" sealed
Shredder Side Access Door	Inside west 2nd floor double doors, south side of shredder	4 x (16" + 28") x ¼"	0	2 doors @ 16" x 28" sealed
Shredder Area Clean Up Door	Inside west 2nd floor double doors, south side of room at floor level	2 x 12" x ¼"	6	Gaps around door edges
Shredder Drum Dump Door	Inside north 3rd floor door	42" x 12" + ½" x 31"	519.5	Gaps around the seal plate: Two triangular openings on east and west sides of door, each with a base of 42" and altitude of 12" and one rectangular opening of 31" x ½" at bottom of door
Shredder Ram Access Door	Inside west 3rd floor door, west side of shredder	2 x (28" + 28½") x ¼"	28.3	Gaps around door edges
Shredder Ram Access Door	Inside north or west 3rd floor door, on top of shredder ram on south side of shredder	4 x 28" x ¼"	0	1 door @ 28" x 28" sealed
Shredder Ram Access Door	Inside north 3rd floor door, east side of shredder	pi x 20" x ¼"	0	1 round access @ 20" diameter sealed
Shredder Chute Cleanup Doors	Inside west 1st floor opening, ladder to 2nd floor of shredder chute	((18" x 2 + 52" x 2) + 2 x 4 x 19") x ½"	146	Gaps around edges of doors: Two side doors - 19" x 19" (east and west sides) One front door - 52" x 18" (south side)
Dribble Chute (first flange)	Inside south 4th floor door, first flange in dribble chute above entrance to T404A	21" x 21"	441	At first flange
Apron Feeder Dribble Chute (opening)	Inside south 4th floor door, inside apron feeder (door on the east) below back end of conveyor	72" x 24"	0	Not part of enclosure
Apron Feeder Feed Chute	Inside south 4th floor door, bottom of feed hopper, above conveyor in apron feeder	72" x 24"	1728	At bottom of chute
Dribble Chute Access Door	Inside south 4th floor door, on floor north of east end of apron feeder	2 x (24" + 24") x ½"	0	Not part of enclosure
TOTAL			3792.8 (26.3 ft^2)	

Table 2 – NDOs During Backup Operations

Opening Description	Location Description	Dimensions of NDO	Size (in^2)	Comments
North Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
Middle Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
South Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
North Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
Middle Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
South Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
Man door 3'x7' (shredder feed chute)	4th floor, west side	⅛" x 17'	0	Gap around door, sealed
Man door 3'x7' (shredder feed chute)	4th floor, west side	⅛" x 3'	0	Gap under door, sealed
Man door 3'x7' (crane bay)	5th floor, south side	⅛" x 17'	0	Gap around door, sealed
Man door 3'x7' (crane bay)	5th floor, south side	⅛" x 3'	0	Gap under door, sealed
Shredder Camera Opening	Inside west 2nd floor double doors, west side of shredder	6" x 6"	0	Sealed with Visqueen and duct tape
Shredder Camera Light Opening	Inside west 2nd floor double doors, west side of shredder	6" x 6"	0	Sealed with Visqueen and duct tape
Shredder Side Access Door	Inside west 2nd floor double doors, east side of shredder	4 x 36" x ¼"	36	Gaps around door edges
Shredder Side Access Door	Inside west 2nd floor double doors, east and west side of shredder	4 x (9" + 32") x ¼"	0	2 doors @ 9" x 32" sealed
Shredder Side Access Door	Inside west 2nd floor double doors, south side of shredder	4 x (16" + 28") x ¼"	0	2 doors @ 16" x 28" sealed
Shredder Area Clean Up Door	Inside west 2nd floor double doors, south side of room at floor level	2 x 12" x ¼"	6	Gaps around door edges
Shredder Drum Dump Door	Inside north 3rd floor door	42" x 12" + ½" x 31"	0	Sealed with Visqueen and duct tape
Shredder Ram Access Door	Inside west 3rd floor door, west side of shredder	2 x (28" + 28½") x ¼"	0	Gaps around door edges sealed with duct tape
Shredder Ram Access Door	Inside north or west 3rd floor door, on top of shredder ram on south side of shredder	4 x 28" x ¼"	0	1 door @ 28" x 28" sealed
Shredder Ram Access Door	Inside north 3rd floor door, east side of shredder	pi x 20" x ¼"	0	1 round access @ 20" diameter sealed
Shredder Chute Cleanup Doors	Inside west 1st floor opening, ladder to 2nd floor of shredder chute	((18" x 2 + 52" x 2) + 2 x 4 x 19") x ½"	0	Gaps around edges of doors sealed with duct tape: Two side doors - 19" x 19" (east and west sides) One front door - 52" x 18" (south side)
Dribble Chute (at first flange)	Inside south 4th floor door, first flange in dribble chute above entrance to T404A	21" x 21"	0	Not part of enclosure
Apron Feeder Dribble Chute (opening)	Inside south 4th floor door, inside apron feeder (door on the east) below back end of conveyor	72" x 24"	0	Cover over opening
Apron Feeder Feed Chute	Inside south 4th floor door, bottom of feed hopper, above conveyor in apron feeder	72" x 24"	0	Cover over opening
Dribble Chute Access Door	Inside south 4th floor door, on floor north of east end of apron feeder	2 x (24" + 24") x ⅛"	0	Gap around door edge, sealed
TOTAL			798 (5.5 ft^2)	

ATTACHMENT 14

FUME MANAGEMENT

Attachment 14
Fume Management

Table of Contents

1.0 Introduction 1
2.0 Closed Vent System 1
2.1 Bulk Solids Building 2
2.2 Shredder 3
2.3 Apron Feeder 4
2.4 Small Sludge Tank 4
2.5 Backup Carbon Adsorption System 5
3.0 Hydrocarbon Vent System 6
3.1 Liquid Tank Farm 7
3.2 Decant Operations/Direct Burn Vessel/Direct Burn Tanker/Corrosive Feed Direct Burn Tanker/Tanker to Tanker Transfer 7
3.3 Large Sludge Tank 8
4.0 Other Vent Systems 8
4.1 Carbon Systems 8
4.1.1 Repack Operations 8
4.1.2 Decant Operations 9
4.2 Discharge to Atmosphere 9
4.2.1 Container Storage and Staging 9
4.2.2 Tanker Unloading 9
4.2.3 E-5 Fingerprint 9
4.3 Vents to Incineration System 9
Table 1 -- NDOs During Normal Operations 11
Table 2 – NDOs During Backup Operations 12

1.0 Introduction

This attachment addresses the management of fumes as mandated by RCRA and the Division of Solid and Hazardous Waste. There are two separate and distinct fume systems associated with the incinerator: the closed vent system (i.e., the combustion air system and the backup carbon adsorption system) and the hydrocarbon vent system. Each will be addressed below with their components outlined. Analyzers and interlocks described below are detailed on drawings D-800-PI-316, D-800-PI-317, D-800-PI-410, and D-800-PI-411 in Attachment 10. There are also other vent systems for other storage and processing operations at the facility. These are discussed in section 4.

2.0 Closed Vent System

The closed vent system (i.e., the combustion air system and the backup carbon system) collects ventilation air from sources that handle waste in the aggregate with greater than 140°F flash point (or, in the case of the direct burn tanker vacuum decant operations, the vent gas is diluted to below 60% LEL prior to entering the closed vent system). These sources include the bulk solids building, the shredder, the apron feeder, the small sludge tank, and the direct burn tanker vacuum pump. The destination of these fumes is to the combustion air fans under normal operating conditions. When the combustion air fans are off, or whenever the ABC temperature is lower than 1400°F for more than ten minutes, the fumes report to the backup carbon adsorption system (described in section 2.5).

The air ventilated from these sources is always exhausted either through the combustion air system to the incinerator or to the backup carbon system. During normal operations, the bulk solids building, the shredder, the apron feeder, the small sludge tank, and the diluted vent gas from the direct burn tanker vacuum decant operations (when operating) will be vented to the kiln and ABC and the backup carbon adsorption system will be isolated. During backup operations (when the combustion air fans are off or when the ABC is operating at a temperature less than 1400°F for more than ten minutes) the bulk solids building, shredder and small sludge tank will be vented to the carbon adsorption system, and the kiln and ABC will be isolated from these sources and will draw combustion air from the 48 inch plenum through the atmospheric vents. The vent from the apron feeder will be closed (i.e., damper HV4050 will be closed) and any venting of this device will be through the bulk solids building to the carbon adsorption system. The direct burn tanker vacuum decant operations will not occur during backup operations.

Inspection ports are located in the kiln and ABC combustion air ducts. These will be checked for dusting and liquid accumulation at least once per week. In-line LEL instruments monitor the ducts (north and south side of kiln combustion air duct, and north and south ABC combustion air ducts) to determine hydrocarbon levels. The LEL instruments are tied to the control computer (WDPF). The process flow is shown in drawing D-034-PF-603 in Attachment 10. The combustion air system and the backup carbon system are shown in drawings D-800-PI-410, and D-800-PI-411 in Attachment 10. The liquid trap for the vacuum decant system in the drive through direct burn station is equipped with a high level sensor, which will alarm locally and in

the control room when the liquid level reaches one foot. The operator will then stop the vacuum decant system and drain the liquid from the trap.

The closed vent system between the bulk solids building, the shredder, the apron feeder, the small sludge tank and the inlet to the ID fans (both kiln/ABC combustion air fans and the carbon adsorption system ID fan) will be operated at below atmospheric pressure. It will have at least one magnehelic pressure gauge installed in the vent system to verify a draft condition in the combustion air ductwork. There will be a flow switch in the combustion air ductwork that will generate a digital signal that will be recorded in Wonderware that can also be used to verify that the closed vent system is operated at a pressure less than atmospheric. The duct work sections between the carbon adsorption system ID fan (K-401) and the carbon adsorbers, between the combustion air fans (K-101 and K-102A/B) and the incinerator, and between the vacuum pump dilution air fan (K-407) and the combustion air plenum will be operated at a positive pressure. These sections of the vent system will be monitored annually to ensure that there are no VOC emissions greater than 500 ppm above background.

2.1 Bulk Solids Building

Dirt and debris are typical waste in bulk solids. Air is drawn from the bulk solids building by the combustion air fans during normal plant operations. The vent system consists of ducting from bulk solids to the air plenum that reports to combustion air fans. The system is activated whenever the combustion air fans are on and the temperature in the ABC is greater than 1400°F. In-line LEL instruments monitor the duct to determine hydrocarbon levels. The LEL instruments are tied into the kiln's control computer, the WDPF. Inspection ports in the ducting must also be checked for dusting and liquid accumulation at least once per week.

When the combustion air fans are off, or whenever the ABC temperature is lower than 1400°F for more than ten minutes, the fumes report to the backup carbon adsorption system.

The bulk solids building and associated vents will serve as the enclosure that is vented through a closed vent system to an enclosed combustion control device (or to the backup carbon adsorption system) in order for the bulk solids tanks to comply with Tank Level 2 controls specified in 40 CFR§264.1084(d)(5). The bulk solids building shall be operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR§52.741, Appendix B. Testing to demonstrate that the bulk solids building meets these criteria will be done initially, and annually thereafter.

Tables 1 and 2 list the natural draft openings (NDOs) that are allowed in the bulk solids building during normal and backup operations respectively. Clean Harbors Aragonite will maintain the surface area of each of the NDOs at or below the specifications given in Table 1 (during normal operations) or Table 2 (during backup operations). However, in order to allow for time to seal openings for backup operations, the NDOs listed in Table 1 may be in place for periods of up to four hours while venting to the backup carbon adsorption system.

The doors to the bulk solids building must remain closed except when unloading waste into the tanks, managing waste with external equipment, emergencies, and maintenance activities. Doors must be closed as soon as possible (at least within 15 minutes) after unloading a truck or performing other activities for which the doors must be opened.

During normal operations, a minimum flow of 5300 acfm will be vented from the bulk solids enclosure at all times to maintain the required minimum flow velocity through the NDOs. Since this air combines with vent gas from the direct burn tanker vacuum pump and dilution air prior to being measured, the following will be implemented. The dilution air fan, damper, or both will be configured to produce a maximum total flow of 5225 acfm to the combustion air plenum. This will be documented by manual measurements prior to operation, and the same configuration will be maintained during operation. To ensure a minimum flow from the bulk solids enclosure, the flow of combustion air will be maintained above 12,000 acfm when the vacuum pump/dilution air fan are operating and above 6775 acfm when they are not operating. This flow will be determined based on the combined flow measured by flow meters FIT1143, FIT1192, FIT1247, and FIT1015. Should there be a malfunction with one or more of these flow meters, four hours will be allowed for repair. These flows will be monitored and recorded at all times the fumes are being directed to the incinerator. The atmospheric air vents (HV4018 and HV4025) will be closed during normal operations. However, during emergency situations, HV4018 will modulate, if necessary, to maintain the LEL of the highest of sensors AIT4018A, B, C, or D below 25%. Any time HV4018 is not closed during normal operations will be recorded in the Wonderware archiving system. The required minimum flow during backup operation will be determined by annually measuring the volumetric flow, corrected to standard conditions, by EPA Method 2 as required by "Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR§52.741, Appendix B. An anemometer may be used in place of the pitot tube for determining the flow in the ducts. The carbon adsorption ID fan and dampers will have the same configuration during operation as during the most recent test. The minimum required flow, along with the documentation supporting this value, will be submitted to the Director within fourteen days of completing the test.

2.2 Shredder

The shredder is located in the bulk solids building. In-line LEL instruments monitor the duct to determine hydrocarbon levels. The LEL instruments are tied into the WDPF. Inspection ports in the ducting must also be checked for dusting and liquid accumulation at least once per week.

The shredder is vented to the incinerator through the combustion air system during normal operations. During backup operations (when the combustion air fans are off or when the ABC is operating at a temperature less than 1400°F for more than ten minutes) the shredder will be vented to the carbon adsorption system. Damper HV4017 will be maintained between 5 and 25% open.

2.3 Apron Feeder

The apron feeder conveys material from bulk solids to the kiln. Air is drawn from the apron feeder to the combustion air system during normal operations.

The apron feeder, which is connected to the bulk solids building, does not function as part of the enclosure for the bulk solids tanks. Rather, the apron feeder chute and dribble chute openings function as NDOs for the bulk solids building. When the backup carbon adsorption system is in operation, the apron feeder chute and dribble chute will be sealed as indicated in Table 2. To minimize air emissions, Clean Harbors Aragonite will seal the apron feeder openings as much as is feasible.

The material from the apron feeder drops through a double set of flop gates before entering the kiln. To isolate the kiln from the apron feeder, only one set of flop gates is open at once. To further isolate the kiln from the apron feeder, a slide gate is located below the bottom flop gates. The slide gate only opens to allow the bottom flop gates to drop the material into the kiln. The chamber between the flop gates is equipped with a nitrogen purge system. This system is used when feeding material that has a potential of catching fire before entering the kiln. When the material is between the flop gates, the chamber is purged with nitrogen so that the heat from the kiln will not ignite the material.

2.4 Small Sludge Tank

The small sludge tank (T-406) is a 5549 gallon tank used for receiving sludge waste from tankers and from other containers. The sludge material must have a flash point greater than 140°F, and must not be reactive. This tank has a large hinged door that covers a grizzly type grating for straining the sludge, and a smaller door for adding material from containers. Material from the large sludge tank (T-401) can be added to the tank via hard piping or a hose. This tank is vented to the incinerator through the combustion air system during normal operations. During backup operations (i.e., when the combustion air fans are off or the ABC temperature drops below 1400°F for more than ten minutes), the ventilation duct damper (HV4023) will remain open and the tank will be vented to the backup carbon adsorption system.

In-line LEL instruments monitor the hydrocarbon levels in the duct. The LEL instruments are tied to the WDPF. Inspection ports in the ducting must also be checked for dusting and liquid accumulation at least once per week.

The tank will comply with the Tank Level 2 controls specified in 40 CFR§264.1084(d)(3). Except when adding waste through the doors to the tank, all doors will be closed. They will be maintained so that there are no visible cracks, holes, gaps, or other open spaces. The doors must be closed as soon as possible (at least within 15 minutes) after unloading a truck or container into the tank. When it is necessary to add waste to the tank through the large tank lid, it should be maintained as closed as possible during the operation.

2.5 Backup Carbon Adsorption System

The carbon adsorption system includes an ID fan (K-401) that maintains the required draft to provide the necessary face velocity across the NDOs in the bulk solids building to capture VOCs and transport them to the carbon adsorbers. An in-line particulate filter prevents dust from clogging the carbon adsorber beds. The carbon adsorption system will vent fumes from the bulk solids building, the shredder, and the small sludge tank when it is in operation. The vent from the apron feeder will be closed and any venting of the apron feeder will be through the bulk solids building.

The carbon adsorption system will be in use during planned maintenance activities and during emergency or unplanned maintenance activities where the ABC temperature is reduced to less than 1400°F for more than ten minutes or when the combustion air fans are off.

The backup carbon adsorption system includes two single stage carbon adsorbers in a parallel arrangement that are operated one at a time. The unit that is in use is the primary backup unit. The unit that is not in use will serve as a secondary backup. The unit serving as the secondary backup will be placed on-line before the carbon in the primary backup unit becomes exhausted. The exhausted carbon will be replaced in the primary unit and that unit will then serve as the secondary backup.

Each carbon adsorber will be filled with 4000 pounds of activated carbon. Each has a bed depth of 2.8 feet and a volume of 133 cubic feet. The type of carbon to be used will meet or exceed the requirements of the following specifications:

For reactivated carbon -- Calgon vapor phase react carbon (VPR 4x6 - 4x10)
For virgin carbon -- Calgon vapor phase BPL 4x6 - 4x10 carbon

The carbon will be replaced on a regular predetermined time interval that is less than the design carbon replacement interval based on the flow rates and VOC concentrations in the closed vent system. Only the hours that the carbon is actually in use are counted for determining when the carbon will be replaced. The actual number of hours that each carbon adsorber is in use (as well as which time period it is in) will be recorded in Wonderware. If a carbon adsorber is used during both time periods (summer as well as other months) the time used will be prorated for each time period (e.g., if reactivated carbon with a summer replacement interval of 528 hours and a replacement interval of 888 hours for all other months were used for 264 hours during the summer and the rest of the time during the other months, the carbon would need to be changed after being used for 444 hours in the other months). June, July, and August are designated as summer months.

The spent carbon will be managed as a hazardous waste. Records of the dates the carbon is removed, placed into permitted storage, and treated will be maintained in the operating record.

The carbon adsorbers will be equipped with CO detectors for monitoring for hot spots in the carbon bed. The carbon adsorbers will be maintained in an inert nitrogen atmosphere while not in use. When idle, the carbon adsorbers will be isolated with dampers at the inlet and outlet (stack) to maintain the inert atmosphere and to minimize VOC emissions.

The carbon adsorption system ID fan and dampers will be configured to maintain the minimum required flow from the bulk solids enclosure as explained in section 2.1. Following each verification of the Procedure T enclosure using the backup carbon adsorption system, the appropriate carbon replacement intervals will be determined (based on the flow necessary to maintain the criteria for the permanent total enclosure and any changes in the VOC concentrations in the closed vent system). Any changes to the system that requires a higher flow rate than was previously determined will not be made until new carbon replacement intervals have been calculated and programmed into the system.

Aragonite will periodically measure the VOC concentrations in the closed vent system by sampling the exhaust at a location before the backup carbon units and analyzing the gas contents to verify that they remain similar to those used in the design analysis. These measurements shall be made at least annually and whenever requested by the Director. If the periodic readings indicate that the VOC levels are higher than those used in the previous calculation of the carbon replacement interval, the carbon replacement interval will be recalculated and programmed into the system. Similarly, if the periodic readings indicate that the VOC levels are lower than those used in the previous calculation of the carbon replacement interval, the carbon replacement interval may be recalculated and programmed into the system.

The carbon replacement intervals (for both reactivated and virgin carbon during both summer and non-summer months) along with any supporting documentation (e.g., flow rate measurements, VOC measurements, etc.) and calculations will be certified by a Utah licensed professional engineer and submitted to the Director within fourteen days of making any change to the carbon replacement interval.

3.0 Hydrocarbon Vent System

The hydrocarbon vent system collects fumes from nitrogen blanketed storage tanks and from processing units that may handle waste with a flash point less than 140°F. Normal operation is to collect fumes via piping or ducting and direct those fumes to the afterburner chamber. A blower and nozzle rated for pre-mixed fuel-air service will be used to input the fumes directly into the afterburner (ABC). In accordance with NFPA, a flame arrestor will separate the collection system from the ABC. The pre-mix blower and an air inlet valve will insure minimum flow velocity at all times to prevent flashback.

A second part of the hydrocarbon system is carbon canisters. These 55-gallon canisters are filled with carbon. There are primary and secondary carbon canister systems. The four primary canisters are sized to handle normal flow rates and the secondary canisters are sized to handle

peak flow rates. Each system consists of a first-stage and second-stage contact of the vent air with carbon. The canisters can be used either in conjunction with the pre-mix blower or independent of the blower. The canisters are used on these occasions:

a) when there is excess flow rate, as determined by overpressure in the hydrocarbon vent system;
b) when the pre-mix blower, K-104, is off;
c) when the ABC temperature is less than 1400°F;
d) when ABC O_2 is less than 2%; or
e) when any combination of these conditions exists.

The process flow is shown in drawing D-034-PF-604.

Temperature is monitored in the carbon system. Piping is installed to allow manual flooding on the carbon canisters with nitrogen if the temperature approaches auto ignition.

When fumes are directed to the carbon canisters, the fumes are monitored with a PID or equivalent every three hours. The sample ports are shown on drawing D-800-PI-316 in Attachment 10. Readings are taken from both primary and secondary headers and recorded on a logsheet at preset three hour intervals. A reading of 100 ppm or greater will indicate breakthrough. Aragonite will immediately replace (not to exceed 30 minutes) any carbon adsorption canisters in which breakthrough has occurred.

Condensation traps are also part of this system. The condensation traps are equipped with level sensors that alarm to the WDPF when approximately 1/3 full. The traps will also be manually checked for liquid accumulation at least once per week. The following sources are part of the hydrocarbon system.

3.1 Liquid Tank Farm

The twelve storage and four blend tanks report to the hydrocarbon vent system. All tanks are under a nitrogen blanket.

3.2 Decant Operations/Direct Burn Vessel/Direct Burn Tanker/Corrosive Feed Direct Burn Tanker/Tanker to Tanker Transfer

The decant process is located in the decant building inside of E-4, container processing. Containers of liquids are decanted via the use of either a vacuum pump or a diaphragm pump to pull liquids from the container and transfer that liquid directly to the tank farm or a direct burn vessel. Air and vapors displaced by the vacuum pump or from the tank or vessel are directed to the hydrocarbon vent system.

Decanting of containers may also occur in the drive through direct burn station. Liquids are transferred from a container to a tanker by using the vacuum pump on the tanker. When the vacuum pump is used, the vacuum exhaust will be mixed with dilution air and directed to the

closed vent system as described above in Section 2. When the backup carbon adsorption system is being used, no vacuum pump decanting from a container to a tanker occurs.

The direct burn vessel can be off-loaded by moving it to the truck unloading building and off-loading the material to the tank farm, or by pressurizing the vessel in building E-4 with nitrogen and forcing the liquid to the tank farm through the decant header, or the vessel can be moved to the direct burn pad or the sludge pad station and off-loaded to the incinerator with nitrogen pressure. Following off-loading of a direct burn vessel or direct burn tanker, any compressed nitrogen in the vessel or tanker will be relieved through the hydrocarbon vent system. Nitrogen and vapors displaced from filling a tanker during a tanker to tanker transfer are also directed to the hydrocarbon vent system.

The corrosive waste feed system can be off-loaded by pressurizing the tanker/tote with nitrogen, by pumping, or both. Following the off-loading of the corrosive waste tanker/tote, any compressed nitrogen in the tanker/tote will be relieved through the hydrocarbon vent system.

3.3 Large Sludge Tank

The large sludge tank (T-401), is tied into the hydrocarbon vent system. This tank is nitrogen blanketed.

4.0 Other Vent Systems

There are other vent systems at Aragonite where waste is stored, sampled, or both, but are not part of either the combustion air or the hydrocarbon system. There are three types of these systems: those that pass through a carbon system prior to discharge to the atmosphere, those that discharge directly to the atmosphere, and those that vent to the incineration system.

4.1 Carbon Systems

Carbon filters exist on the vent systems in the E-4 decant area, the E-4 repack area, and the E-2 repack area. Weekly inspections are conducted on each of the carbon filters. The inspection consists of checking to see if the carbon is free of impediments, verifying operability of the vent system, checking the carbon level, and checking for organic saturation. Saturation will be determined once a week by venting a container with volatile organic liquid and measuring the hydrocarbon concentration exiting the filters with a PID or equivalent. The carbon will be removed and ultimately incinerated when the reading goes over 500 ppm. These inspections will be documented and the log sheets will contain the area, date, inspectors name, material removed, operational status, carbon level, and hydrocarbon concentration. If carbon changeout is required, documentation that it was changed will also be provided. The profile number of the waste being vented through the system at the time of the inspection will also be noted on the inspection form.

4.1.1 Repack Operations

Repack operations occur at the three workstations in building E-2 and the repack area in building E-4. Each workstation and the E-4 repack area is supplied with point source ventilation for the

capture of fumes from the repack operations. No container processing will occur at a workstation or the E-4 repack area unless the ventilation system for that particular area is operating. In order to ensure adequate capture velocities, any container that is open in the workstations will be no more than 3 feet from the ventilation hood in workstation 3 or no more than 2 feet from the ventilation hood in workstations 1 or 2. This requirement is only applicable for lab packs when the inner container(s) are opened. The ventilation air from each workstation is pulled by a fan located external to E-2 on the west side of the building. The air from the fan passes through carbon filters before being discharged to the atmosphere. For the E-4 repack area, a fume exhauster is used to pull air from the work room's area to a carbon filter and then to a roof ventilator on top of building E-4.

4.1.2 Decant Operations

The container decant room is in the container processing building, E-4. Liquid is removed from containers and pumped to either the tank farm or a direct burn vessel. A fume exhauster pulls across the top of a drum while liquid is removed to the tank farm or to a direct burn vessel. The ventilation of the fumes is to a carbon filter and then to atmosphere at the roof of E-4.

4.2 Discharge to Atmosphere

4.2.1 Container Storage and Staging

Container storage occurs in the buildings designated as E-1, E-2, E-3, E-4, E-5, E-6, E-7, 68, and 69-North/South. Staging containers for processing (feed to the kiln, repacking, decanting, shredding, or any combination thereof) occurs in building E-4.

Fumes are not expected in these areas since containers are kept closed. The buildings have ventilation systems designed to meet the air exchanges specified in the Uniform Building Code (UBC).

4.2.2 Tanker Unloading

The tanker unloading building ventilation meets Uniform Building Code requirements for air exchanges. Waste is exposed to atmosphere only when a sample of the truck load is taken. Pumps are used to unload liquid tankers. The contents of these tankers report to the liquid tank farm.

4.2.3 E-5 Fingerprint

Anytime there are waste samples/chemicals present in an E-5 fingerprint area fume hood, the fume hood is exhausted to the atmosphere above E-5. The fume hoods in the E-5 fingerprint area meet all applicable NFPA requirements.

4.3 Vents to Incineration System

The chute of the deslagger is vented back to the ABC to minimize the release of steam and other emissions. A duct leads from the top of the deslagger chute to the ABC and fumes are drawn into the incinerator by the fan in the duct. Two eductors vent to ports in the south side of the

afterburner. The first is the vent from the top of the glove box in the cylinder feed station. An eductor draws a vacuum of 1-2" WC on the glove box and exhausts it to the afterburner. This glove box is only used during emergencies to manage leaking cylinders and will not be used routinely to empty cylinders. A second eductor vents the drum pumping station glove box. Compressed air to the eductor draws a vacuum of 1" WC in the glove box. If compressed air to the eductor cannot be maintained, the system will automatically switch to nitrogen to continue venting the glove box.

Table 1 – NDOs During Normal Operations

Opening Description	Location Description	Dimensions of NDO	Size (in^2)	Comments
North Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
Middle Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
South Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
North Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
Middle Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
South Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
Man door 3'x7' (shredder feed chute)	4th floor, west side	½" x 17'	25.5	Gap around door
Man door 3'x7' (shredder feed chute)	4th floor, west side	½" x 3'	4.5	Gap under door
Man door 3'x7' (crane bay)	5th floor, south side	½" x 17'	25.5	Gap around door
Man door 3'x7' (crane bay)	5th floor, south side	½" x 3'	4.5	Gap under door
Shredder Camera Opening	Inside west 2nd floor double doors, west side of shredder	6" x 6"	36	Opening into shredder
Shredder Camera Light Opening	Inside west 2nd floor double doors, west side of shredder	6" x 6"	36	Opening into shredder
Shredder Side Access Door	Inside west 2nd floor double doors, east side of shredder	4 x 36" x ¼"	36	Gaps around door edges
Shredder Side Access Door	Inside west 2nd floor double doors, east and west side of shredder	4 x (9" + 32") x ¼"	0	2 doors @ 9" x 32" sealed
Shredder Side Access Door	Inside west 2nd floor double doors, south side of shredder	4 x (16" + 28") x ¼"	0	2 doors @ 16" x 28" sealed
Shredder Area Clean Up Door	Inside west 2nd floor double doors, south side of room at floor level	2 x 12" x ¼"	6	Gaps around door edges
Shredder Drum Dump Door	Inside north 3rd floor door	42" x 12" + ½" x 31"	519.5	Gaps around the seal plate: Two triangular openings on east and west sides of door; each with a base of 42" and altitude of 12" and one rectangular opening of 31" x ½" at bottom of door
Shredder Ram Access Door	Inside west 3rd floor door, west side of shredder	2 x (28" + 28¼") x ⅛"	28.3	Gaps around door edges
Shredder Ram Access Door	Inside north or west 3rd floor door, on top of shredder ram on south side of shredder	4 x 28" x ¼"	0	1 door @ 28" x 28" sealed
Shredder Ram Access Door	Inside north 3rd floor door, east side of shredder	pi x 20" x ¼"	0	1 round access @ 20" diameter sealed
Shredder Chute Cleanup Doors	Inside west 1st floor opening, ladder to 2nd floor of shredder chute	((18" x 2 + 52" x 2) + 2 x 4 x 19") x ½"	146	Gaps around edges of doors: Two side doors - 19" x 19" (east and west sides) One front door - 52" x 18" (south side)
Dribble Chute (first flange)	Inside south 4th floor door, first flange in dribble chute above entrance to T404A	21" x 21"	441	At first flange
Apron Feeder Dribble Chute (opening)	Inside south 4th floor door, inside apron feeder (door on the east) below back end of conveyor	72" x 24"	0	Not part of enclosure
Apron Feeder Feed Chute	Inside south 4th floor door, bottom of feed hopper, above conveyor in apron feeder	72" x 24"	1728	At bottom of chute
Dribble Chute Access Door	Inside south 4th floor door, on floor north of east end of apron feeder	2 x (24" + 24") x ½"	0	Not part of enclosure
TOTAL			3792.8 (26.3 ft^2)	

Table 2 -- NDOs During Backup Operations

Opening Description	Location Description	Dimensions of NDO	Size (in^2)	Comments
North Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
Middle Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
South Roll Up Door (10'x16')	East side of bulk solids building	½" x 32'	192	Gap around door edge
North Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
Middle Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
South Roll Up Door (10'x16')	East side of bulk solids building	½" x 10'	60	Gap at top of door
Man door 3'x7' (shredder feed chute)	4th floor, west side	⅛" x 17'	0	Gap around door, sealed
Man door 3'x7' (shredder feed chute)	4th floor, west side	⅛" x 3'	0	Gap under door, sealed
Man door 3'x7' (crane bay)	5th floor, south side	⅛" x 17'	0	Gap around door, sealed
Man door 3'x7' (crane bay)	5th floor, south side	⅛" x 3'	0	Gap under door, sealed
Shredder Camera Opening	Inside west 2nd floor double doors, west side of shredder	6" x 6"	0	Sealed with Visqueen and duct tape
Shredder Camera Light Opening	Inside west 2nd floor double doors, west side of shredder	6" x 6"	0	Sealed with Visqueen and duct tape
Shredder Side Access Door	Inside west 2nd floor double doors, east side of shredder	4 x 36" x ¼"	36	Gaps around door edges
Shredder Side Access Door	Inside west 2nd floor double doors, east and west side of shredder	4 x (9" + 32") x ¼"	0	2 doors @ 9" x 32" sealed
Shredder Side Access Door	Inside west 2nd floor double doors, south side of shredder	4 x (16" + 28") x ¼"	0	2 doors @ 16" x 28" sealed
Shredder Area Clean Up Door	Inside west 2nd floor double doors, south side of room at floor level	2 x 12" x ¼"	6	Gaps around door edges
Shredder Drum Dump Door	Inside north 3rd floor door	42" x 12" + ⅛" x 31"	0	Sealed with Visqueen and duct tape
Shredder Ram Access Door	Inside west 3rd floor door, west side of shredder	2 x (28" + 28⅛") x ¼"	0	Gaps around door edges sealed with duct tape
Shredder Ram Access Door	Inside north or west 3rd floor door, on top of shredder ram on south side of shredder	4 x 28" x ¼"	0	1 door @ 28" x 28" sealed
Shredder Ram Access Door	Inside north 3rd floor door, east side of shredder	pi x 20" x ¼"	0	1 round access @ 20" diameter sealed
Shredder Chute Cleanup Doors	Inside west 1st floor opening, ladder to 2nd floor of shredder chute	((18" x 2 + 52" x 2) + 2 x 4 x 19") x ½"	0	Gaps around edges of doors sealed with duct tape: Two side doors - 19" x 19" (east and west sides) One front door - 52" x 18" (south side)
Dribble Chute (at first flange)	Inside south 4th floor door, first flange in dribble chute above entrance to T404A	21" x 21"	0	Not part of enclosure
Apron Feeder Dribble Chute (opening)	Inside south 4th floor door, inside apron feeder (door on the east) below back end of conveyor	72" x 24"	0	Cover over opening
Apron Feeder Feed Chute	Inside south 4th floor door, bottom of feed hopper, above conveyor in apron feeder	72" x 24"	0	Cover over opening
Dribble Chute Access Door	Inside south 4th floor door, on floor north of east end of apron feeder	2 x (24" + 24") x ½"	0	Gap around door edge, sealed
TOTAL			798 (5.5 ft^2)	

ATTACHMENT 3

INSPECTIONS

Table of Contents

1.0 Introduction 1
2.0 Frequency of Inspections 1
2.1 Daily 1
2.2 Weekly 2
2.3 Monthly 2
2.4 Quarterly 2
2.5 Annual 3
2.6 Other 3
3.0 Types of Problems 3
3.1 Containers 4
3.2 Tanks 4
3.3 Incinerator 5
3.3.1 Instruments 6
3.4 Sumps and Secondary Containment Areas 7
3.5 Closed Vent Systems and Carbon Adsorbers 7
3.6 Other Areas 7
4.0 Corrective Action 8
5.0 Inspection Matrix 8

1.0 Introduction

The inspections outlined in this Attachment are the minimum required. All inspections required by this permit will be documented on forms and maintained as part of the operating record. Those forms are not included in this Attachment, but a list of all required inspection items, frequencies, and what is being inspected is included as an Inspection Matrix. Although the format of the inspection forms may change, all items on the Inspection Matrix will be included on the forms and inspected.

This Inspection Attachment addresses those areas that store and or treat hazardous waste or have the potential to come in contact with hazardous waste. It addresses mainly the lab and areas south of Main Street. It also includes inspection items which pertain to the Aragonite facility's ability to respond quickly to a spill, fire, explosion or natural disaster.

All inspections are documented and the documentation is kept in the vault in the administration building. Reports may be maintained electronically or be microfilmed with the on-site capability to produce a legible hard copy. All inspection forms will note the day, the inspector's name, the time of the inspection, any deficiencies found or corrective action taken and the work order number which indicates that a repair request has been submitted to the maintenance department. If the repair is minor and the inspector can fix it (such as by replacing a sign, or getting another fire extinguisher) the notation of what was done will be made on the form rather than referencing a work order number. All items on the inspection logs will be filled in (i.e., no blanks). If a particular item is not applicable for some reason, it will be noted on the form along with the reason. Actual gauge readings from inspected apparatus where gauges are present or readings are taken will be noted on the inspection logs.

2.0 Frequency of Inspections

The Inspection Matrix specifies the minimum frequency of inspection for each required item. The following outlines the basis for the frequencies specified in the Inspection Matrix.

2.1 Daily

- Loading and unloading areas when in use.
- Operability of doors on Buildings 68, 69-North and 69-South when in use.
- Aboveground piping visually inspected for leaks.
- Tank systems for leaks, leaking pumps, leaking piping, gauge readings, data gathered from the leak detection equipment, monitor printouts, equipment operation, waste levels, emission control equipment, indications of leaks or spills, use of overflow equipment, detect corrosion, secondary containment integrity, seal pot liquid level above the bottom of pipe to form a seal, and nitrogen blanket on tank. Spills/leaks must be cleaned up with 24 hours.
- Welded flanges, joints, connections.

- Tank monitoring equipment.
- Inspect incinerator and associated equipment (e.g., pumps, valves, conveyors, pipes, etc.) for leaks, spills, fugitive emissions, deterioration, excessive wear, and signs of tampering.
- Visually inspect the incinerator monitoring instrumentation for out of tolerance and/or recorded operational data.
- Kiln combustion air system.
- Continuous Emissions Monitoring System.
- Temperature in refrigerated trailers when in use.
- Cylinder storage area when in use.
- Cylinder feed station when in use.
- Drum pumping storage area when in use.
- Drum pumping station when in use.

2.2 Weekly

- Carbon vent systems
- Condensation traps
- Fire pump check
- Emergency generator check
- Eyewash and showers
- Perimeter lights, signs on fence, fence
- Containers and containment systems
- Test alarm system
- Carbon vent systems

2.3 Monthly

- Fire Extinguishers
- Tank secondary containment system for indications of cracks, gaps, and peeling of the epoxy sealant.

2.4 Quarterly

- Potable water system check must be done for the Utah Division of Drinking Water.
- Spill kit inspection. The required spill kits and contents of each kit are outlined in the Preparedness and Prevention Plan (Attachment 5). If used, the kits must be fully restored prior to being placed in-service. The kits will also be inspected once per quarter to insure their integrity.
- Evacuation drills.

2.5 Annual

- All of the blend and aqueous tanks will be emptied and inspected annually for the general condition and to measure the corrosion of each tank.
- The closed vent system between the bulk solids building, the shredder, the apron feeder, the sludge receiving tank and the inlet to the ID fans (both kiln/ABC combustion air fans and the carbon adsorption system ID fan) will be inspected initially and annually thereafter for holes, gaps, loose connections, etc. that could lead to air pollution emissions.
- The duct work sections between the carbon adsorption system ID fan (K-401) and the carbon adsorbers, and between the combustion air fans (K-101 and K-102A/B) and the incinerator will be monitored initially and annually thereafter by EPA Method 21 to ensure there are "no detectable emissions" (no readings greater than 500 ppm above background levels). All components and connections will be visually inspected each year after the initial monitoring to check for defects that could lead to air emissions. Any components that are repaired or replaced will be monitored to ensure that it operates with no detectable emissions.
- The sludge receiving tank fixed roof and its closure devices will be inspected initially and annually thereafter for defects such as cracks, holes, gaps, broken, cracked, or otherwise damaged seals, broken or missing hatches, access covers, caps, or other closure devices, etc.

2.6 Other

- When the hydrocarbon vent system carbon canisters are in operation, they must be monitored every 3 hours for breakthrough.
- The direct burn vessel (DBV), the direct burn tanker systems, the direct burn corrosive feed system, and the drum pumping station must be inspected at least once each operating hour when hazardous waste is being transferred from the DBV, direct burn tanker, the direct burn corrosive tanker/tote, or container in the drum pumping station to the kiln/afterburner.
- The sludge and bulk solids tanks will be emptied and inspected every four years for the general condition and to measure the corrosion of each tank.

3.0 Types of Problems

The personnel conducting the inspections shall be trained on the types of problems they should be looking for. The Inspection Matrix briefly outlines the types of problems that will be looked for. However, more detailed, written instructions describing what the inspector should look for, the acceptable criteria (e.g., gauge readings, liquid levels, valve positions, etc.), and the proper notation to be placed on the inspection log (e.g., "ok", "x", "clean", "out-of-service", etc.) for

each inspection item will also be used by the inspectors. These instructions may be specified on the form itself, or they may be specified in instructions which will accompany the applicable log.

The following sections outline some of the items that will be looked for during the inspections. Additional detail will be included in the instruction book and communicated to the inspectors. These instructions shall be developed with sufficient detail to avoid inconsistencies and confusion between inspections and log entries between different inspectors. These instructions will be in place for all items on the Inspection Matrix.

Any item currently out-of-service or active work orders will be listed on the backlog list maintained by maintenance and on the inspection forms. A historical list of out-of-service items or work orders will also be maintained on paper or electronically.

3.1 Containers

Hazard labels, AG barcode labels with green acceptance labels or marks on the barcode, which are required for storage of the containers, are inspected. Unique barcode labels (identified by "REPACK" or "CONS" (for consolidate) on the barcode) are used for repacks and the green label or mark on the barcode is not required. Any labels that have fallen off are replaced. Label deficiency is noted on the weekly form and corrected in-place.

The drums and containers are inspected to ensure that the lids/covers and bungs are in place.

The containers are inspected for signs of corrosion. The drum/container will be overpacked/repackaged if it has lost its integrity.

Drums/containers are inspected for leaks. If a leak is found, the source of the leak is determined. The contents may be transferred to another suitable container. Absorbent is used to contain and cleanup the spilled liquid. As an alternative, the container may be overpacked into a salvage drum.

The stacking of containers is inspected to ensure stability. There is also a check for the minimum required aisle space.

Compressed gas cylinders are checked for leakage daily by walkthrough monitoring with a photo ionization detector and color indicating tubes.

3.2 Tanks

Tanks are inspected to determine that the overflow has not been used, the seal pot has integrity, and nitrogen is blanketing the tank farm tanks and sludge storage tank (T-401). Tank level is checked to determine compliance with the capacity limitations.

Each tank is inspected once per day to detect corrosion or erosion and leaking of fixtures or seams.

The overfilling control equipment is inspected visually every day. The seal pot is checked to determine if liquid level is above the discharge pipe which maintains the seal. The tank and its auxiliary equipment, i.e., pump, levels, piping, valves, seals, etc. will be checked.

Equipment used to off-load, such as hoses and couplings, are visually inspected after each use. The unloading bay is sufficient to contain a tanker spill in case of ultimate failure by a hose. The hose will be replaced on any visual indication of a leak.

Data collected on all monitoring equipment, such as pressure gauges, level indicators, etc. is logged each day to ensure that the tank is operating according to design specifications and operation procedures. Plant maintenance is responsible for all calibration.

The level of waste in each tank (including bulk solids) is checked at least once each day to ensure that the tanks have not exceeded their permitted capacity.

The bulk solids tanks are in a building. Inside the tanks and the areas above the tanks within the internal walls of the building are treated as a confined space. There is a walkway that runs under the bulk solids tanks. The tanks set on 12" beams. The inspector will walk underneath the bulk solids tanks and check for leaks under the four tanks: T-403, T-404A, T-404B-East, and T-404B-West. The inspector illuminates the area under each tank to look for leaks. If there are any leaks, a spill report will be prepared. If the leak came from a tank, then the tank will be declared out-of-service and the contents of the leaking tank will be transferred to another bulk solids tank.

The blend liquids and aqueous tanks are emptied and visually inspected and the shell thickness measured annually. A similar inspection and measurement of the sludge and bulk solids tanks is conducted at least once every four years.. A report of these inspections will be retained on-site.

All the tanks (except the bulk solids tanks, T-403, T-404A and T-404B East and West, and the sludge receiving tank, T-406) contain manways to allow access for visual inspections. Tank entry procedures will conform to OSHA standards for confined space entry.

Should the tank be found defective, it will be taken out of service and repaired or replaced. Defective is defined as a leak, bulge, or a split seam.

3.3 Incinerator

The inspection schedules for the incinerator are included in this section. The waste feed flow is recorded continuously as are the combustion parameters, such as air, oxygen, temperature, etc. Also, parameters that are mandated in the permit will be monitored at the frequency specified.

Daily inspections at the incinerator will be conducted for all equipment associated with the incinerator train, material feed systems, process and residue handling system. The inspector will check for leaks or spills, fugitive emissions, and signs of tampering. Any evidence of leaking must be reported to the shift supervisor as a possible indication of a worn seal.

The emergency waste feed cut-off controls and alarms will be tested every 168 operating hours. The test is detailed in Attachment 12.

3.3.1 Instruments

The instrument checklist is signed off by a shift supervisor daily. All of the instruments critical to monitoring the incinerator and gas cleaning process are included on the checklist. These are listed on the Inspection Matrix. The supervisor signs off that the instrument is in good working order.

Typically, the shift supervisor and operators will be looking for the following indications of faulty instruments:

Thermocouples. The transmitters are set up to have the 4-20 ma signal fail low if the thermocouple breaks and fail high if the transmitter fails. In either case, the signal will show in the plant control system as "BAD" and provide a "SENSOR" alarm. Various other conditions could cause the reading to drift. An instrument will be checked if the variation in reading between any two instruments is greater than 10% of the lower value.

Oxygen Probes. These instruments will generally fail high. By comparison to each other and the oxygen probe in the stack, response of each instrument to the process, and visual examination of process conditions, a determination can be made of which instrument is reading correctly.

Pressure Transmitters. If the transmitter fails, the signal should fail to the low end of the span. If the measuring diaphragm is damaged, then the signal should read zero, which may not be the low end of the span. If the sensing line is plugged, then the signal will not vary during changing process conditions. The process can also be used to determine if a pressure instrument has failed by comparison to other pressure instruments in the process.

Flame Sensors. These will fail open indicating no flame. Since each BMS has two flame sensors both would have to fail during running to trip the BMS. In the process of relighting the burner, the bad flame sensor would be found.

Pressure Switches. Failure of these devices can only be determined by process conditions. A specific action is expected under certain process conditions. If that does not occur, then the switch is considered bad.

Magnetic Flowmeters. These instruments are set to fail low when the signal strength fails. The instruments would be reading correctly otherwise.

pH Probes. Deposit build-up on the probe can cause the reading to respond very slowly or even not at all.

3.4 Sumps and Secondary Containment Areas

Sumps are inspected daily to determine if they contain liquids or other material. The locations of the sumps subject to these inspection requirements are found on Drawings D-034-M-002 SP and SK-090-997-AR in Attachment 10.

If a sump, drip pan, or secondary containment area contains any material, it will be emptied within 24 hours of discovering the contents. This means that all material, liquid, solid, or both, will be removed. If ongoing precipitation prevents the emptying of all material from a sump or secondary containment system located outside of a building, the sump or secondary containment system will be emptied within 24 hours of the end of the precipitation event. If this occurs, an explanation to this effect, and the time and date of the end of the precipitation event will be noted on the inspection forms. However, sufficient material must be removed during the event to maintain sufficient secondary containment capacity of the system. Solid material which accumulates in sumps inside buildings from the routine processing of containers (e.g., dried mud falling off of pallets, small pieces of wood from pallets, dust, etc. (but not spill material)) will be noted on the daily inspection forms but may be removed weekly.

Any material removed will be managed as a hazardous waste except for liquid collected in sumps SP-614A, B, C, and D and their associated bermed areas which is returned to the neutralization system for use in the process. It will follow the management procedures as outlined in the Waste Analysis Plan (Attachment 1).

3.5 Closed Vent Systems and Carbon Adsorbers

The combustion air ductwork and the ductwork for the backup carbon adsorbers will be visually inspected annually. The inspections will look for leaks, holes, cracks, gaps, etc. which could lead to emissions from the ductwork and the carbon adsorption vessels.

3.6 Other Areas

Safety and security inspections are made of the fence, locks, fire extinguishers, alarms, eyewash stations and showers. In addition, the fire pumps, both electric and diesel are started-up and checked for operability. The emergency generator is also started-up with oil and gas checks for operability. Drawing D-034-M-005 in Attachment 10 specifies the location of this equipment.

Two spill kits are located at opposite ends of the plant. There will also be one located for the container management buildings (in building E-4). Each kit is inspected for complete inventory. If the seal is broken, the inventory sheet is checked, initialed and placed back in the spill kit. A quarterly check will be made to determine integrity of the contents of the spill kit.

4.0 Corrective Action

All items on the inspection logs will have a notation of their status (i.e., blanks will not be used to indicate that an item was acceptable or that the status had not changed). If the status is not acceptable, there will be a notation of the corrective actions performed (if it can be fixed immediately) or a reference to a work order if additional work needs to be done.

The method of documenting that a request for repair has been made is through the work order system. That same system is also used to indicate when the work has been completed. The form itself may change but will contain sufficient information to be able to clearly track all the work completed.

All work orders will clearly indicate the work that was performed. It will also indicate who performed the work. It will also clearly indicate that all of the required work is completed and the date of completion. If some of the work is done but additional work is needed, this will be noted on the work order or reference additional work orders.

Any malfunction or deterioration discovered by an inspection shall be corrected within 72 hours. If the remedy requires more time, Clean Harbors Aragonite will submit to the Director, before the expiration of the 72-hour period, a proposed time schedule for correcting the problem. All corrective actions will be completed in a timely manner. Until the problem is corrected, the equipment will be declared out-of-service. This will be noted on the inspection logs.

For purposes of these reporting requirements, deterioration shall be reported to the Director when it has proceeded to such an extent as to make the device inoperable or unable to function according to its intended purpose. However, all deterioration leading to this final state shall be noted on the appropriate inspection forms and reported internally so that corrective action will be taken when necessary.

If a problem is discovered during an inspection where a hazard to human heath or the environment is imminent or has already occurred, remedial action shall be taken immediately.

If a tank is determined to be unfit for use, it will be removed from service immediately and emptied. If the nitrogen blanket is removed the tank must be isolated from the fume management system.

5.0 Inspection Matrix

The items that will be inspected, the frequency of inspection, and a brief description of what is being inspected is contained in this section.

INSPECTION MATRIX

Inspection Item	Minimum Frequency	Types of Problems
Laboratory		
Lab refrigerators and freezers	Daily	Operable, correct temperature
Lab instrument eyewashes	Weekly	Operable
Lab instrument showers	Weekly	Operable
Lab sample prep eyewashes	Weekly	Operable
Lab sample prep showers	Weekly	Operable
Lab cooler storage secondary containment	Daily (when in use)	In place, empty
Lab cooler storage access	Weekly(when in use)	Adequate
Lab cooler storage containers	Weekly(when in use)	Bulging, leaking, corroding
Lab cooler storage containers	Weekly(when in use)	Proper placement
Lab cooler storage containers	Weekly(when in use)	Closed, bungs in
Lab cooler storage containers	Weekly(when in use)	Labels intact and legible
Lab cooler storage waste segregation	Weekly(when in use)	Incompatibility check
Lab cooler storage portable secondary containment	Monthly(when in use)	Visually free of damage

Inspection Item	Minimum Frequency	Types of Problems
Container Buildings (E-1, E-2, E-3, E-4, E-5, E-6, E-7, 68, 69-North, and 69-South)		
E-1 sump and sump in each bay (B-3, B-4, B-5)	Daily	Empty
E-1 sump at dock (SP-625)	Daily	Empty
E-1 loading/unloading area	Daily (when in use)	Leaks, spills
E-1 loading/unloading area	Monthly	Visually free of cracks, gaps, damage
E-1 debris drum	Weekly	Closed, labeled, dated, <90 days
E-1 aisles	Weekly	Adequate
E-1 containers	Weekly	Bulging, leaking, corroding
E-1 containers	Weekly	Proper placement and stacking
E-1 containers	Weekly	Closed, bungs in
E-1 containers	Weekly	Labels intact and legible
E-1 pallets	Weekly	Provide 4" clearance
E-1 eyewashes	Weekly	Operable
E-1 showers	Weekly	Operable
E-1 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-1 waste segregation	Weekly	Incompatible check
E-1 floor, berms	Monthly	Visually free of cracks, gaps, damage
E-1 carbon filters	Weekly	Operable, carbon level, free of plugging, breakthrough

Inspection Item	Minimum Frequency	Types of Problems
E-2 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-2 aisles	Weekly	Adequate
E-2 containers	Weekly	Bulging, leaking, corroding
E-2 containers	Weekly	Proper placement and stacking
E-2 containers	Weekly	Closed, bungs in
E-2 containers	Weekly	Labels intact and legible
E-2 pallets	Weekly	Provide 4" clearance
E-2 eyewashes	Weekly	Operable
E-2 showers	Weekly	Operable
E-2 waste segregation	Weekly	Incompatible check
E-2 floor, berms	Monthly	Visually free of gaps, cracks, damage
E-2 repack carbon filter	Weekly	Operable, carbon level, free of plugging, breakthrough
E-3 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-3 aisles	Weekly	Adequate
E-3 containers	Weekly	Bulging, leaking, corroding
E-3 containers	Weekly	Proper placement and stacking
E-3 containers	Weekly	Closed, bungs in
E-3 containers	Weekly	Labels intact and legible

Inspection Item	Minimum Frequency	Types of Problems
E-3 pallets	Weekly	Provide 4" clearance
E-3 eyewashes	Weekly	Operable
E-3 showers	Weekly	Operable
E-3 waste segregation	Weekly	Incompatible check
E-3 floor, berm	Monthly	Visually free of cracks, gaps, damage
E-4 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-4 aisles	weekly	Adequate
E-4 containers	Weekly	Bulging, leaking, corroding
E-4 containers	Weekly	Proper placement and stacking
E-4 containers	Weekly	Closed, bungs in
E-4 containers	Weekly	Labels intact and legible
E-4 pallets	Weekly	Provide 4" clearance
E-4 eyewashes	Weekly	Operable
E-4 showers	Weekly	Operable
E-4 decant eyewash/shower	Weekly	Operable
E-4 repack eyewash/shower	Weekly	Operable
E-4 waste segregation	Weekly	Incompatible check
E-4 floor, berms	Monthly	Visually free of cracks, gaps, damage
E-4 sump at dock (SP-627)	Daily	Empty
E-4 loading/unloading area	Daily	Leaks, spills

Inspection Item	Minimum Frequency	Types of Problems
	(when in use)	
E-4 loading/unloading area	Monthly	Visually free of cracks, gaps, damage
E-4 decant LEL/O_2/HCN/H_2S alarms	Monthly	Calibrate, alarms audible
E-4 repack LEL/O_2/HCN/H_2S alarms	Monthly	Calibrate, alarms audible
E-4 decant LEL/O_2/HCN/H_2S alarms	Weekly	Instruments operable
E-4 repack LEL/O_2/HCN/H_2S alarms	Weekly	Instruments operable
E-4 decant carbon filters	Weekly	Operable, carbon level, free of plugging, breakthrough
E-4 repack carbon filters	Weekly	Operable, carbon level, free of plugging, breakthrough
E-5 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-5 aisles	Weekly	Adequate
E-5 containers	Weekly	Bulging, leaking, corroding
E-5 containers	Weekly	Proper placement and stacking
E-5 containers	Weekly	Closed, bungs in
E-5 containers	Weekly	Labels legible and intact
E-5 pallets	Weekly	Provide 4" clearance
E-5 eyewashes	Weekly	Operable
E-5 showers	Weekly	Operable
E-5 waste segregation	Weekly	Incompatibility check
E-5 floor, berms	Monthly	Visually free of cracks, gaps, damage

Inspection Item	Minimum Frequency	Types of Problems
E-5 sump and sump in each bay (B-1, B-2, B-6)	Daily	Empty
E-5 sump at dock (SP-619)	Daily	Empty
E-5 loading/unloading area	Daily (when in use)	Leaks, spills
E-5 loading/unloading area	Monthly	Visually free of cracks, gaps, damage
E-5 carbon filter	Weekly	Operable, carbon level, free of plugging, breakthrough
E-6 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-6 aisles	Weekly	Adequate
E-6 containers	Weekly	Bulging, leaking, corroding
E-6 containers	Weekly	Proper placement and stacking
E-6 containers	Weekly	Closed, bungs in
E-6 containers	Weekly	Labels intact and legible
E-6 pallets	Weekly	Provide 4" clearance
E-6 eyewashes	Weekly	Operable
E-6 shower	Weekly	Operable
E-6 waste segregation	Weekly	Incompatibility check
E-6 floor, berm	Monthly	Visually free of cracks, gaps, damage
E-7 aisles	Weekly	Adequate

Inspection Item	Minimum Frequency	Types of Problems
E-7 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-7 containers	Weekly	Bulging, leaking, corroding
E-7 containers	Weekly	Proper placement and stacking
E-7 containers	Weekly	Closed, bungs in
E-7 containers	Weekly	Labels intact and legible
E-7 pallets	Weekly	Provide 4" clearance
E-7 eyewashes	Weekly	Operable
E-7 showers	Weekly	Operable
E-7 waste segregation	Weekly	Incompatibility check
E-7 floor	Monthly	Visually free of gaps, cracks, damage
E-7 LEL Alarm	Monthly	Calibrate, alarm audible
E-7 LEL Alarm	Weekly	Instrument operable
Building 68 secondary containment including tank T-611	Daily (when in use)	Empty
Building 68 doors	Daily (when in use)	Operational check
Building 68 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Building 68 containers	Weekly	Bulging, leaking, corroding
Building 68 containers	Weekly	Proper placement and stacking

Inspection Item	Minimum Frequency	Types of Problems
Building 68 containers	Weekly	Closed, bungs in
Building 68 containers	Weekly	Labels intact and legible
Building 68 pallets	Weekly	Provide 4" clearance
Building 68 waste segregation	Weekly	Incompatibility check
Building 68 floor, berm	Monthly	Visually free of gaps, cracks, damage
Buildings 69-North/69-South secondary containment	Daily (when in use)	Empty
Buildings 69-North/69-South doors	Daily (when in use)	Operational check
Buildings 69-North/69-South alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Buildings 69-North/69-South containers	Weekly	Bulging, leaking, corroding
Buildings 69-North/69-South containers	Weekly	Proper placement and stacking
Buildings 69-North/69-South containers	Weekly	Closed, bungs in
Buildings 69-North/69-South containers	Weekly	Labels intact and legible
Buildings 69-North/69-South pallets	Weekly	Provide 4" clearance
Buildings 69-North/69-South waste segregation	Weekly	Incompatibility check
Buildings 69-North/69-South floor, berm	Monthly	Visually free of gaps, cracks, damage
Breezeway		
Breezeway sump SP-626	Daily	Empty

Inspection Item	Minimum Frequency	Types of Problems
Breezeway aisles	Weekly	Adequate
Breezeway eyewash	Weekly	Operable
Breezeway shower	Weekly	Operable
Breezeway alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Breezeway floor, berms	Monthly	Visually free of cracks, gaps, damage
Breezeway containers	Weekly	Bulging
Breezeway containers	Weekly	Leaking, corroding
Breezeway containers	Weekly	Closed, bungs in
Breezeway containers	Weekly	Labels intact and legible
Breezeway waste segregation	Weekly	Incompatibility check
Breezeway pallets	Weekly	Provide 4" clearance
E-1, E-5, E-4 Receiving Docks - Refrigerated Trailers and Containers		
Refrigerated trailer containers	Weekly(when in use)	Bulging, leaking, corroding
Refrigerated trailer containers	Weekly(when in use)	Proper placement and stacking
Refrigerated trailer containers	Weekly(when in use)	Closed, bungs in
Refrigerated trailer containers	Weekly(when in use)	Labels intact and legible
Refrigerated trailer pallets	Weekly(when in use)	Provide 4" clearance

Inspection Item	Minimum *Frequency*	Types of Problems
Refrigerated trailer aisles	Weekly(when in use)	Adequate
Refrigerated trailers	Daily(when in use)	Temperature ≤ 40 °F
E-1, E-5, E-4 receiving dock aisles and access	Weekly(when in use)	Adequate
E-1, E-5, E-4 receiving dock containers	Weekly(when in use)	Bulging, leaking, corroding
E-1, E-5, E-4 receiving dock containers	Weekly(when in use)	Proper placement
E-1, E-5, E-4 receiving dock containers	Weekly(when in use)	Covered/closed, bungs in
E-1, E-5, E-4 receiving dock containers	Weekly(when in use)	Labels intact and legible
E-1, E-5, E-4 receiving dock pallets	Weekly(when in use)	Provide 4" clearance
E-1, E-5, E-4 receiving dock waste segregation	Weekly(when in use)	Incompatible check
E-1, E-5, E-4 receiving dock secondary containment	Monthly	Visually free of cracks, gaps, damage
Gas cylinder storage area		
Cylinder storage area cylinders	Daily(when in use)	Bulging, leaking, corroding
Cylinder storage area cylinders	Weekly(when in use)	All cylinders capped
Cylinder storage area cylinders	Weekly(wh	Barcodes/labels intact and legible

Inspection Item	Minimum Frequency	Types of Problems
	en in use)	
Cylinder storage area segregation	Weekly(wh en in use)	Incompatibility check
Cylinder storage area	Weekly(wh en in use)	All barriers and signs in place
Cylinder storage area	Weekly(wh en in use)	Area clear of combustible waste and vegetation
Gas cylinder feed station		
Cylinder feed station cylinders	Daily(when in use)	Bulging, leaking, corroding
Cylinder feed station cylinders	Weekly(wh en in use)	All cylinders capped
Cylinder feed station cylinders	Weekly(wh en in use)	Barcodes/labels intact and legible
Cylinder feed station fittings	Daily (when in use)	Leaks, visible damage
Cylinder feed station hoses	Daily (when in use)	Leaks, visible damage
Cylinder feed station lance assembly	Daily (when in use)	Leaks, visible damage
Cylinder feed station LEL Alarm	Monthly(w hen in use)	Calibrate, alarm audible

Inspection Item	Minimum Frequency	Types of Problems
Cylinder feed station LEL Alarm	Weekly(when in use)	Instrument operable
Gas cylinder feed station glove box		
Cylinder feed station glove box doors, north	Daily (when in use)	Leaks, visible damage
Cylinder feed station glove box doors, north	Weekly(when in use)	Operational check
Cylinder feed station glove box doors, south	Daily (when in use)	Leaks, visible damage
Cylinder feed station glove box doors, south	Weekly(when in use)	Operational check
Cylinder feed station glove box seals	Daily (when in use)	Leaks, visible damage
Cylinder feed station glove box lexan	Daily (when in use)	Leaks, visible damage
Cylinder feed station glove box safety latches, north	Daily (when in use)	Visible damage
Cylinder feed station glove box safety latches, south	Daily (when in use)	Visible damage
Cylinder feed station glove box lance assembly	Daily (when in use)	Leaks, visible damage

Inspection Item	Minimum Frequency	Types of Problems
Drum pumping storage		
Drum pumping storage secondary containment	Daily (when in use)	In place, empty
Drum pumping storage barriers	Daily (when in use)	In place, damage
Drum pumping storage aisles and access	Weekly	Adequate
Drum pumping storage containers	Weekly(when in use)	Bulging, leaking, corroding
Drum pumping storage containers	Weekly(when in use)	Proper placement
Drum pumping storage containers	Weekly(when in use)	Closed, bungs in
Drum pumping storage containers	Weekly(when in use)	Labels intact and legible
Drum pumping storage waste segregation	Weekly(when in use)	Incompatibility check
Drum pumping storage portable secondary containment	Monthly(when in use)	Visually free of damage
Drum pumping storage pad	Monthly	Check for cracks, damage
Drum pumping station		
Drum pumping station containers/educt system and waste feed system pump and piping integrity	Hourly (when in use)	Spill control equipment, corrosion, erosion, other damage/deterioration, releases, gauge readings
Drum pumping station secondary containment	Daily (when in use)	Empty

Inspection Item	Minimum Frequency	Types of Problems
Drum pumping station containers	Weekly(when in use)	Bulging, leaking, corroding
Drum pumping station containers	Weekly(when in use)	Closed, bungs in
Drum pumping station containers	Weekly(when in use)	Labels intact and legible
Drum pumping station containers	Weekly(when in use)	Incompatibility check
Drum pumping station secondary containment	Monthly	Check for cracks/gaps/damage
Drum pumping station LEL Alarm	Weekly	Instrument operable
Drum pumping station LEL Alarm	Monthly	Calibrate, alarm audible
CO_2 fire suppression system	Daily (when in use)	Isolation valve open, cylinder charged and connected
Drum pumping station glove box doors	Daily (when in use)	1" WC vacuum, visible damage
Drum pumping station glove box lexan	Daily (when in use)	1" WC vacuum, visible damage
Drum pumping station glove box seals	Daily (when in use)	1" WC vacuum, visible damage
Drum pumping station grounding	Daily (when in use)	Good connections, deterioration
Direct Burn Vessel/Direct Burn Tanker Systems and Container Storage/Direct Burn Corrosive System		

Inspection Item	Minimum Frequency	Types of Problems
Direct burn vessel and piping integrity	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Direct burn vessel berm floor and berm	Monthly	Check for cracks/gaps/damage
Direct burn vessel interior inspection	Annual(when in use)	Inspect interior of each direct burn vessel for pitting, corrosion, general condition, thickness
Drive through direct burn tanker, piping integrity and pump system	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Drive through direct burn station secondary containment	Monthly	Check for cracks/gaps/damage
Drive through direct burn tankers/containers	Weekly (when not in use)	Leaking, deterioration
Drive through direct burn station	Daily (when in use)	Check for the presence of combustible debris
Drive through direct burn station eyewash	Weekly	Operable
Drive through direct burn station shower	Weekly	Operable
Truck unloading direct burn tanker, piping integrity and pump system	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Truck unloading direct burn station secondary containment	Monthly	Check for cracks/gaps/damage
Truck unloading direct burn tankers	Weekly (when not in use)	Leaking, deterioration
Truck unloading direct burn station	Daily	Check for the presence of combustible debris

Inspection Item	Minimum Frequency	Types of Problems
	(when in use)	
Truck unloading direct burn station eyewash	Weekly	Operable
Truck unloading direct burn station pad shower	Weekly	Operable
Truck unloading aisles and access	Weekly(when in use)	Adequate
Truck unloading containers	Weekly(when in use)	Bulging, leaking, corroding
Truck unloading containers	Weekly(when in use)	Proper placement and stacking
Truck unloading containers	Weekly(when in use)	Closed, bungs in
Truck unloading containers	Weekly(when in use)	Labels intact and legible
Truck unloading pallets	Weekly(when in use)	Provide 4" clearance
Truck unloading waste segregation	Weekly(when in use)	Incompatibility check
Drive through corrosive direct burn tanker/tote, piping integrity and pump system	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Drive through corrosive direct burn station secondary containment	Monthly	Check for cracks/gaps/damage
Drive through corrosive direct burn tanker/tote	Weekly (when not in use)	Leaking, deterioration
	Daily	

Inspection Item	Minimum Frequency	Types of Problems
Drive through corrosive direct burn station	(when in use)	Check for the presence of combustible debris
Drive through corrosive direct burn station eyewash	Weekly	Operable
Drive through corrosive direct burn station shower	Weekly	Operable
Drive through corrosive direct burn station LEL/O_2/HCN/H_2S alarms	Monthly	Calibrate, alarms audible
Drive through corrosive direct burn station LEL/O_2/HCN/H_2S alarms	Weekly	Instruments operable
Sludge Tanks T-401 and T-406		
T-401 sump SP-620	Daily	Empty
T-406 sump SP-618	Daily	Empty
T-401	Daily	Nitrogen blanket, leaking piping, waste levels
T-406	Daily	Leaking pump(s)
sludge pit O_2 instrument/alarm	Monthly	Calibrate, alarm audible
sludge pit O_2 instrument/alarm	Weekly	Instrument operable
T-401 integrity	Daily	No visible leaks, check for corrosion
T-406 integrity	Daily	No visible leaks, check for corrosion
T-401 and T-406 interior inspection	Every Four Years	Inspect interior of each tank for pitting, corrosion, general condition, thickness
T-406 berm (secondary containment system)	Monthly	Concrete free of gaps/cracks, clean
T-401 berm (secondary containment system)	Monthly	Concrete free of gaps/cracks, clean
T-401 waste level	Daily	Acceptable, record
T-406 waste level	Daily	Acceptable, record

Inspection Item	Minimum Frequency	Types of Problems
valves for T-401 & T-406	Daily	Leaks
The sludge receiving tank fixed roof and its closure devices	Annually	Check for defects such as cracks, holes, gaps, broken, cracked, or otherwise damaged seals, broken or missing hatches, access covers, caps, or other closure devices, etc.
T-406 berm eyewash	Weekly	Operable
T-406 berm shower	Weekly	Operable
Bulk Solids Tanks		
T-403 waste level	Daily	Acceptable
T-404B-East/West waste level	Daily	Acceptable
T-404A waste level	Daily	Acceptable
T-403, T404A, T-404B-East/West interior inspection	Every Four Years	Inspect interior of each tank for pitting, corrosion, general condition, thickness
Bulk Solids Tunnel		
T-403	Daily	Evidence of leak
T-404B-East/West	Daily	Evidence of leak
T-404A	Daily	Evidence of leak
Tunnel concrete	Monthly	Visually free of cracks/gaps, clean
Bulk Solids Unloading Berm/Sludge System Unloading Berm and Bulk Solids/Sludge Pad Container Storage		
Sludge pad direct burn station tankers	Weekly (when not in use)	Leaking, deterioration

Inspection Item	Minimum Frequency	Types of Problems
Sludge pad direct burn station	Daily (when in use)	Check for the presence of combustible debris
Sludge pad direct burn station Pumps (412, A,B)	Daily (when in use)	No leaks/drips observed
Sludge pad direct burn station tanker and piping integrity	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Bulk solids unloading area	Daily (when in use)	Spills
Sludge unloading area	Daily (when in use)	Spills
Concrete/secondary containment	Monthly	Free of cracks/gaps, damage, clean
Sump SP-617	Daily	Empty
Alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Bulk solids/sludge pad storage barriers	Daily (when in use)	In place, free from damage
Bulk solids/sludge pad aisles	Weekly (when in use)	Adequate

Inspection Item	Minimum Frequency	Types of Problems
Bulk solids/sludge pad containers	Weekly (when in use)	Bulging, leaking, corroding
Bulk solids/sludge pad containers	Weekly (when in use)	Proper placement
Bulk solids/sludge pad containers	Weekly (when in use)	Covered/closed, bungs in
Bulk solids/sludge pad containers	Weekly (when in use)	Labels intact and legible
Bulk solids/sludge pad pallets	Weekly (when in use)	Provide 4" clearance
Bulk solids/sludge pad waste segregation	Weekly (when in use)	Incompatible check
Truck Unloading (E-14)		
Truck unloading areas	Daily (when in use)	Spills
West bay concrete	Monthly	Visually free of cracks/gaps/damage
Middle bay concrete	Monthly	Visually free of cracks/gaps/damage
E-14 sumps (3)	Daily	Empty
Sump SP-309	Daily	Empty

Inspection Item	Minimum Frequency	Types of Problems
Hoses/fittings	Daily	Good condition
Piping	Daily	No leaks observed from truck unloading to tank farm
Pumps (P302A,B)	Daily	No leaks/drips observed
Alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Truck unloading LEL alarms	Monthly	Calibrate, alarms audible
Truck unloading LEL alarms	Weekly	Instrument operable
Eyewashes	Weekly	Operable
Showers	Weekly	Operable
Thaw Shed		
Spill Kit	Quarterly	Verify contents
Fire Station		
Spill Kit	Quarterly	Verify contents
Container Building		
Spill Kit	Quarterly	Verify contents
Tank Farm Pump Houses (E-15 and E-16)		
E-15 sump	Daily	Empty
P306A	Daily	Check for leaking
P306B	Daily	Check for leaking
P303A, B	Daily	Check for leaking
E-15 nitrogen blankets for T-301 through T-324	Daily	Blanket present

Inspection Item	Minimum Frequency	Types of Problems
E-15 piping and headers	Daily	Check for leaking, empty drip pans
E-15 containment area	Daily	Spills
E-15 eyewash	Weekly	Operable
E-15 shower	Weekly	Operable
E-15 containers	Weekly	Closed container; label is current; no leaks; <90 days
E-15 concrete floor	Monthly	Free of cracks/gaps/damage
E-15 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-15 LEL alarms	Monthly	Calibrate, alarms audible
E-15 LEL alarms	Weekly	Instrument operable
E-16 sump	Daily	Empty
P304A	Daily	Check for leaking
P304B	Daily	Check for leaking
P312	Daily	Check for leaking
E-16 piping and headers	Daily	Check for leaking, empty drip pans
E-16 containment area	Daily	Spills
E-16 eyewash	Weekly	Operable
E-16 shower	Weekly	Operable
E-16 containers	Weekly	Closed container; label is current; no leaks; <90 days
E-16 concrete floor	Monthly	Free of gaps/cracks/damage
E-16 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible

Inspection Item	Minimum Frequency	Types of Problems
E-16 LEL alarms	Monthly	Calibrate, alarms audible
E-16 LEL alarms	Weekly	Instrument operable
Tank Farm (T-301-312 and T-321-324)		
T-301-312 and T-321-324 seal pots and overflows	Daily	Check level of liquid and signs of waste
T-301-312 and T-321-324 integrity	Daily	Check if tank is leaking, check for corrosion
T-301-312 and T-321-324 tank temperatures, waste levels, valve positions	Daily	Acceptable, record
T-301-304, T-305-308, T-309-312, and T-321-324 berm floors	Monthly	Check for cracks/gaps/damage
T-301-304, T-305-308, T-309-312, and T-321-324 berm walls	Monthly	Check for cracks/gaps/damage
T-301-312 and T-321-324 interior inspection	Annual	Inspect interior of each tank for pitting, corrosion, general condition, thickness
Sumps SP-310A, B, C, and D	Daily	Empty
lower T-323-324 shower/eyewash	Weekly	Operable
upper T-322-321 shower/eyewash	Weekly	Operable
lower T-303-304 shower/eyewash	Weekly	Operable
upper T-303-304 shower/eyewash	Weekly	Operable
lower T-309-310 shower/eyewash	Weekly	Operable
upper T-309-310 shower/eyewash	Weekly	Operable
Tank Farm Carbon Canister Fume Management System		
condensation traps	Weekly	liquid accumulation
hydrocarbon sensor ports	3 hrs (when in use)	Breakthrough

Inspection Item	Minimum Frequency	Types of Problems
carbon canisters	3 hrs (when in use)	Temperature
Combustion Air System Inspection		
Shredder vent duct	Daily	Check for presence of dust or liquids
Bulk solids building vent	Daily	Check for presence of dust or liquids
North ABC combustion air duct	Daily	Check for presence of dust or liquids
South ABC combustion air duct	Daily	Check for presence of dust or liquids
Kiln combustion air silencer	Daily	Check for presence of dust or liquids
Drain valves/traps, Bottom of kiln, Combustion air silencer	Daily	Open and drain any liquids; record amount drained
Sludge X309	Daily	Open, drain, record
Decant X308	Daily	Open, drain, record
Kiln X310	Daily	Open, drain, record
Trap X311	Daily	Open, drain, record
The closed vent system between the bulk solids building, the shredder, the apron feeder, the sludge receiving tank and the inlet to the ID fans (both kiln/ABC combustion air fans and the carbon adsorption system ID fan)	Annually	Check for leaks, holes, gaps, loose connections, etc. that could lead to emissions
The duct work sections between the carbon adsorption system ID fan (K-401) and the carbon adsorbers, and between the combustion air fans (K-101 and K-102A/B) and the incinerator	Annually	No detectable emissions (Method 21), defects that could lead to emissions
Carbon Adsorption Vessels F-412A/B	Annually	Check for leaks, holes, gaps, that could cause emissions
Kiln Area		
Kiln/ABC berm	Daily	Clean; free of spills

Inspection Item	Minimum Frequency	Types of Problems
Kiln/ABC and associated equipment (including feed conveyors, deslagger, piping, etc.)	Daily	Fugitive emissions, deterioration, excessive wear, signs of tampering, leaks, spills
Sump SP-624	Daily	Empty
Sump SP-615	Daily	Empty
Eyewashes	Weekly	Operable
Showers	Weekly	Operable
Slag Pad Area		
Sumps SP-623A/B	Daily	Empty
Eyewash	Weekly	Operable
Shower	Weekly	Operable
Wet End I Area		
Sump SP-629	Daily	Empty
Sump SP-614B	Daily	Empty
Sump in dust loadout	Daily	Empty
Wet End I equipment (pumps, piping, valves, tanks, etc.)	Daily	Fugitive emissions, deterioration, excessive wear, signs of tampering, leaks, spills
Sump SP-614A	Daily	Empty
Eyewashes	Weekly	Operable
Showers	Weekly	Operable
Wet End II Area		
Soda Ash Sump SP-614D	Daily	Empty

Inspection Item	Minimum Frequency	Types of Problems
Sump SP-616	Daily	Overflowing, pump operable
WESP Sump SP-614C	Daily	Empty
Wet End II equipment (pumps, piping, valves, tanks, etc.)	Daily	Fugitive emissions, deterioration, excessive wear, signs of tampering, leaks, spills
Eyewashes	Weekly	Operable
Showers	Weekly	Operable
CEM system	Daily	Sample transport and interface system, CEMS calibration data
Emergency Equipment		
Emergency Generator	Weekly	Start generator, operable, check oil & gas
primary electric fire pump	Weekly	Start pump, operable
secondary diesel fire pump	Weekly	Start pump, operable
Safety and Security		
Fence	Weekly	All gates closed and locked, poles upright, no holes that would allow unauthorized entry
Warning signs	Weekly	Are signs secured to fence? Are signs visible and legible?
perimeter lighting	Weekly	Check for lights working
all fire extinguishers plant wide	Monthly	Tagged, charged, in place, damaged
evacuation drills	Quarterly	Check for proper response
Instrumentation		
kiln temperature TT 1005 A,B,C	Daily	Good working order, out of tolerance, recording properly
ABC temperature TE/TT 1009 A,B,C	Daily	Good working order, out of tolerance, recording properly

Inspection Item	Minimum Frequency	Types of Problems
Stack CO AE/AT 2199 A,B,C	Daily	Good working order, out of tolerance, recording properly
Gas velocity FE/FT 2195	Daily	Good working order, out of tolerance, recording properly
combustion zone pressure PIT 1006 A,B,C	Daily (when in operation)	Good working order, out of tolerance, recording properly
baghouse pressure drop PIT 2020 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
Activated carbon feed rate WT 2037 RL	Daily (when in operation)	Good working order, out of tolerance, recording properly
1st stage flow FT 2092A/B	Daily (when in operation)	Good working order, out of tolerance, recording properly
2nd stage flow FT 2095A/B	Daily (when in operation)	Good working order, out of tolerance, recording properly
1st stage pH AE/AT 2104 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
2nd stage pH AE/AT 2130 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
2nd stage effluent pH AE/AT 2129 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
saturator flow FT 2081A/B	Daily (when in	Good working order, out of tolerance, recording properly

Inspection Item	Minimum Frequency	Types of Problems
	operation)	
spray dryer gas temperature TE/TT 2001 A,B,C	Daily (when in operation)	Good working order, out of tolerance, recording properly
saturator gas temperature TE/TT 2082 A,B,C	Daily (when in operation)	Good working order, out of tolerance, recording properly
hot duct O_2 AT 1010 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
kiln rotation ST1003	Daily (when in operation)	Good working order, out of tolerance, recording properly
secondary air pressure PT 1018	Daily (when in operation)	Good working order, out of tolerance, recording properly
Vent position ZSC 1017	Daily (when in operation)	Good working order, out of tolerance, recording properly
atomization air differential pressure PDSL 1124, 1187, 1224	Daily (when in operation)	Good working order, out of tolerance, recording properly
waste liquid pressure PSL 1119A, 1119B, 1196	Daily (when in operation)	Good working order, out of tolerance, recording properly
combustion air pressure PSL 1127, PI 1191, 1244	Daily (when in operation)	Good working order, out of tolerance, recording properly

Inspection Item	Minimum Frequency	Types of Problems
BMS operating A104M, A106AM, A106BM	Daily (when in operation)	Good working order, out of tolerance, recording properly

ATTACHMENT 3

INSPECTIONS

Table of Contents

1.0 Introduction 1
2.0 Frequency of Inspections 1
2.1 Daily 1
2.2 Weekly 2
2.3 Monthly 2
2.4 Quarterly 2
2.5 Annual 32
2.6 Other 3
3.0 Types of Problems 3
3.1 Containers 4
3.2 Tanks 4
3.3 Incinerator 5
3.3.1 Instruments 65
3.4 Sumps and Secondary Containment Areas 76
3.5 Closed Vent Systems and Carbon Adsorbers 7
3.6 Other Areas 7
4.0 Corrective Action 87
5.0 Inspection Matrix 8

1.0 Introduction

The inspections outlined in this Attachment are the minimum required. All inspections required by this permit will be documented on forms and maintained as part of the operating record. Those forms are not included in this Attachment, but a list of all required inspection items, frequencies, and what is being inspected is included as an Inspection Matrix. Although the format of the inspection forms may change, all items on the Inspection Matrix will be included on the forms and inspected.

This Inspection Attachment addresses those areas that store and or treat hazardous waste or have the potential to come in contact with hazardous waste. It addresses mainly the lab and areas south of Main Street. It also includes inspection items which pertain to the Aragonite facility's ability to respond quickly to a spill, fire, explosion or natural disaster.

All inspections are documented and the documentation is kept in the vault in the administration building. Reports may be maintained electronically or be microfilmed with the on-site capability to produce a legible hard copy. All inspection forms will note the day, the inspector's name, the time of the inspection, any deficiencies found or corrective action taken and the work order number which indicates that a repair request has been submitted to the maintenance department. If the repair is minor and the inspector can fix it (such as by replacing a sign, or getting another fire extinguisher) the notation of what was done will be made on the form rather than referencing a work order number. All items on the inspection logs will be filled in (i.e., no blanks). If a particular item is not applicable for some reason, it will be noted on the form along with the reason. Actual gauge readings from inspected apparatus where gauges are present or readings are taken will be noted on the inspection logs.

2.0 Frequency of Inspections

The Inspection Matrix specifies the minimum frequency of inspection for each required item. The following outlines the basis for the frequencies specified in the Inspection Matrix.

2.1 Daily

- Loading and unloading areas when in use.
- Operability of doors on Buildings 68, 69-North and 69-South when in use.
- Aboveground piping visually inspected for leaks.
- Tank systems for leaks, leaking pumps, leaking piping, gauge readings, data gathered from the leak detection equipment, monitor printouts, equipment operation, waste levels, emission control equipment, indications of leaks or spills, use of overflow equipment, detect corrosion, secondary containment integrity, seal pot liquid level above the bottom of pipe to form a seal, and nitrogen blanket on tank. Spills/leaks must be cleaned up with 24 hours.
- Welded flanges, joints, connections.

- Tank monitoring equipment.
- Inspect incinerator and associated equipment (e.g., pumps, valves, conveyors, pipes, etc.) for leaks, spills, fugitive emissions, deterioration, excessive wear, and signs of tampering.
- Visually inspect the incinerator monitoring instrumentation for out of tolerance and/or recorded operational data.
- Kiln combustion air system.
- Continuous Emissions Monitoring System.
- Temperature in refrigerated trailers when in use.
- Cylinder storage area when in use.
- Cylinder feed station when in use.
- Drum pumping storage area when in use.
- Drum pumping station when in use.

2.2 Weekly

- Carbon vent systems
- Condensation traps
- Fire pump check
- Emergency generator check
- Eyewash and showers
- Perimeter lights, signs on fence, fence
- Containers and containment systems
- Test alarm system
- Carbon vent systems

2.3 Monthly

- Fire Extinguishers
- Tank secondary containment system for indications of cracks, gaps, and peeling of the epoxy sealant.

2.4 Quarterly

- Potable water system check must be done for the Utah Division of Drinking Water.
- Spill kit inspection. The required spill kits and contents of each kit are outlined in the Preparedness and Prevention Plan (Attachment 5). If used, the kits must be fully restored prior to being placed in-service. The kits will also be inspected once per quarter to insure their integrity.
- Evacuation drills.

2.5 Annual

- All of the blend and aqueous tanks will be emptied and inspected annually for the general condition and to measure the corrosion of each tank.
- The closed vent system between the bulk solids building, the shredder, the apron feeder, the sludge receiving tank and the inlet to the ID fans (both kiln/ABC combustion air fans and the carbon adsorption system ID fan) will be inspected initially and annually thereafter for holes, gaps, loose connections, etc. that could lead to air pollution emissions.
- The duct work sections between the carbon adsorption system ID fan (K-401) and the carbon adsorbers, and between the combustion air fans (K-101 and K-102A/B) and the incinerator will be monitored initially and annually thereafter by EPA Method 21 to ensure there are "no detectable emissions" (no readings greater than 500 ppm above background levels). All components and connections will be visually inspected each year after the initial monitoring to check for defects that could lead to air emissions. Any components that are repaired or replaced will be monitored to ensure that it operates with no detectable emissions.
- The sludge receiving tank fixed roof and its closure devices will be inspected initially and annually thereafter for defects such as cracks, holes, gaps, broken, cracked, or otherwise damaged seals, broken or missing hatches, access covers, caps, or other closure devices, etc.

2.6 Other

- When the hydrocarbon vent system carbon canisters are in operation, they must be monitored every 3 hours for breakthrough.
- The direct burn vessel (DBV), the direct burn tanker systems, the direct burn corrosive feed system, and the drum pumping station must be inspected at least once each operating hour when hazardous waste is being transferred from the DBV, direct burn tanker, the direct burn corrosive tanker/tote, or container in the drum pumping station to the kiln/afterburner.
- The sludge and bulk solids tanks will be emptied and inspected every four years for the general condition and to measure the corrosion of each tank.

3.0 Types of Problems

The personnel conducting the inspections shall be trained on the types of problems they should be looking for. The Inspection Matrix briefly outlines the types of problems that will be looked for. However, more detailed, written instructions describing what the inspector should look for, the acceptable criteria (e.g., gauge readings, liquid levels, valve positions, etc.), and the proper notation to be placed on the inspection log (e.g., "ok", "x", "clean", "out-of-service", etc.) for

each inspection item will also be used by the inspectors. These instructions may be specified on the form itself, or they may be specified in instructions which will accompany the applicable log.

The following sections outline some of the items that will be looked for during the inspections. Additional detail will be included in the instruction book and communicated to the inspectors. These instructions shall be developed with sufficient detail to avoid inconsistencies and confusion between inspections and log entries between different inspectors. These instructions will be in place for all items on the Inspection Matrix.

Any item currently out-of-service or active work orders will be listed on the backlog list maintained by maintenance and on the inspection forms. A historical list of out-of-service items or work orders will also be maintained on paper or electronically.

3.1 Containers

Hazard labels, AG barcode labels with green acceptance labels or marks on the barcode, which are required for storage of the containers, are inspected. Unique barcode labels (identified by "REPACK" or "CONS" (for consolidate) on the barcode) are used for repacks and the green label or mark on the barcode is not required. Any labels that have fallen off are replaced. Label deficiency is noted on the weekly form and corrected in-place.

The drums and containers are inspected to ensure that the lids/covers and bungs are in place.

The containers are inspected for signs of corrosion. The drum/container will be overpacked/repackaged if it has lost its integrity.

Drums/containers are inspected for leaks. If a leak is found, the source of the leak is determined. The contents may be transferred to another suitable container. Absorbent is used to contain and cleanup the spilled liquid. As an alternative, the container may be overpacked into a salvage drum.

The stacking of containers is inspected to ensure stability. There is also a check for the minimum required aisle space.

Compressed gas cylinders are checked for leakage daily by walkthrough monitoring with a photo ionization detector and color indicating tubes.

3.2 Tanks

Tanks are inspected to determine that the overflow has not been used, the seal pot has integrity, and nitrogen is blanketing the tank farm tanks and sludge storage tank (T-401). Tank level is checked to determine compliance with the capacity limitations.

Each tank is inspected once per day to detect corrosion or erosion and leaking of fixtures or seams.

The overfilling control equipment is inspected visually every day. The seal pot is checked to determine if liquid level is above the discharge pipe which maintains the seal. The tank and its auxiliary equipment, i.e., pump, levels, piping, valves, seals, etc. will be checked.

Equipment used to off-load, such as hoses and couplings, are visually inspected after each use. The unloading bay is sufficient to contain a tanker spill in case of ultimate failure by a hose. The hose will be replaced on any visual indication of a leak.

Data collected on all monitoring equipment, such as pressure gauges, level indicators, etc. is logged each day to ensure that the tank is operating according to design specifications and operation procedures. Plant maintenance is responsible for all calibration.

The level of waste in each tank (including bulk solids) is checked at least once each day to ensure that the tanks have not exceeded their permitted capacity.

The bulk solids tanks are in a building. Inside the tanks and the areas above the tanks within the internal walls of the building are treated as a confined space. There is a walkway that runs under the bulk solids tanks. The tanks set on 12" beams. The inspector will walk underneath the bulk solids tanks and check for leaks under the four tanks: T-403, T-404A, T-404B-East, and T-404B-West. The inspector illuminates the area under each tank to look for leaks. If there are any leaks, a spill report will be prepared. If the leak came from a tank, then the tank will be declared out-of-service and the contents of the leaking tank will be transferred to another bulk solids tank.

The blend liquids and aqueous tanks are emptied and visually inspected and the shell thickness measured annually. A similar inspection and measurement of the sludge and bulk solids tanks is conducted at least once every four years. A report of these inspections will be retained on-site.

All the tanks (except the bulk solids tanks, T-403, T-404A and T-404B East and West, and the sludge receiving tank, T-406) contain manways to allow access for visual inspections. Tank entry procedures will conform to OSHA standards for confined space entry.

Should the tank be found defective, it will be taken out of service and repaired or replaced. Defective is defined as a leak, bulge, or a split seam.

3.3 Incinerator

The inspection schedules for the incinerator are included in this section. The waste feed flow is recorded continuously as are the combustion parameters, such as air, oxygen, temperature, etc. Also, parameters that are mandated in the permit will be monitored at the frequency specified.

Daily inspections at the incinerator will be conducted for all equipment associated with the incinerator train, material feed systems, process and residue handling system. The inspector will check for leaks or spills, fugitive emissions, and signs of tampering. Any evidence of leaking must be reported to the shift supervisor as a possible indication of a worn seal.

The emergency waste feed cut-off controls and alarms will be tested every 168 operating hours. The test is detailed in Attachment 12.

3.3.1 Instruments

The instrument checklist is signed off by a shift supervisor daily. All of the instruments critical to monitoring the incinerator and gas cleaning process are included on the checklist. These are listed on the Inspection Matrix. The supervisor signs off that the instrument is in good working order.

Typically, the shift supervisor and operators will be looking for the following indications of faulty instruments:

Thermocouples. The transmitters are set up to have the 4-20 ma signal fail low if the thermocouple breaks and fail high if the transmitter fails. In either case, the signal will show in the plant control system as "BAD" and provide a "SENSOR" alarm. Various other conditions could cause the reading to drift. An instrument will be checked if the variation in reading between any two instruments is greater than 10% of the lower value.

Oxygen Probes. These instruments will generally fail high. By comparison to each other and the oxygen probe in the stack, response of each instrument to the process, and visual examination of process conditions, a determination can be made of which instrument is reading correctly.

Pressure Transmitters. If the transmitter fails, the signal should fail to the low end of the span. If the measuring diaphragm is damaged, then the signal should read zero, which may not be the low end of the span. If the sensing line is plugged, then the signal will not vary during changing process conditions. The process can also be used to determine if a pressure instrument has failed by comparison to other pressure instruments in the process.

Flame Sensors. These will fail open indicating no flame. Since each BMS has two flame sensors both would have to fail during running to trip the BMS. In the process of relighting the burner, the bad flame sensor would be found.

Pressure Switches. Failure of these devices can only be determined by process conditions. A specific action is expected under certain process conditions. If that does not occur, then the switch is considered bad.

Magnetic Flowmeters. These instruments are set to fail low when the signal strength fails. The instruments would be reading correctly otherwise.

pH Probes. Deposit build-up on the probe can cause the reading to respond very slowly or even not at all.

3.4 Sumps and Secondary Containment Areas

Sumps are inspected daily to determine if they contain liquids or other material. The locations of the sumps subject to these inspection requirements are found on Drawings D-034-M-002 SP and SK-090-997-AR in Attachment 10.

If a sump, drip pan, or secondary containment area contains any material, it will be emptied within 24 hours of discovering the contents. This means that all material, liquid, solid, or both, will be removed. If ongoing precipitation prevents the emptying of all material from a sump or secondary containment system located outside of a building, the sump or secondary containment system will be emptied within 24 hours of the end of the precipitation event. If this occurs, an explanation to this effect, and the time and date of the end of the precipitation event will be noted on the inspection forms. However, sufficient material must be removed during the event to maintain sufficient secondary containment capacity of the system. Solid material which accumulates in sumps inside buildings from the routine processing of containers (e.g., dried mud falling off of pallets, small pieces of wood from pallets, dust, etc. (but not spill material)) will be noted on the daily inspection forms but may be removed weekly.

Any material removed will be managed as a hazardous waste except for liquid collected in sumps SP-614A, B, C, and D and their associated bermed areas which is returned to the neutralization system for use in the process. It will follow the management procedures as outlined in the Waste Analysis Plan (Attachment 1).

3.5 Closed Vent Systems and Carbon Adsorbers

The combustion air ductwork and the ductwork for the backup carbon adsorbers will be visually inspected annually. The inspections will look for leaks, holes, cracks, gaps, etc. which could lead to emissions from the ductwork and the carbon adsorption vessels.

3.6 Other Areas

Safety and security inspections are made of the fence, locks, fire extinguishers, alarms, eyewash stations and showers. In addition, the fire pumps, both electric and diesel are started-up and checked for operability. The emergency generator is also started-up with oil and gas checks for operability. Drawing D-034-M-005 in Attachment 10 specifies the location of this equipment.

Two spill kits are located at opposite ends of the plant. There will also be one located for the container management buildings (in building E-4). Each kit is inspected for complete inventory. If the seal is broken, the inventory sheet is checked, initialed and placed back in the spill kit. A quarterly check will be made to determine integrity of the contents of the spill kit.

4.0 Corrective Action

All items on the inspection logs will have a notation of their status (i.e., blanks will not be used to indicate that an item was acceptable or that the status had not changed). If the status is not acceptable, there will be a notation of the corrective actions performed (if it can be fixed immediately) or a reference to a work order if additional work needs to be done.

The method of documenting that a request for repair has been made is through the work order system. That same system is also used to indicate when the work has been completed. The form itself may change but will contain sufficient information to be able to clearly track all the work completed.

All work orders will clearly indicate the work that was performed. It will also indicate who performed the work. It will also clearly indicate that all of the required work is completed and the date of completion. If some of the work is done but additional work is needed, this will be noted on the work order or reference additional work orders.

Any malfunction or deterioration discovered by an inspection shall be corrected within 72 hours. If the remedy requires more time, Clean Harbors Aragonite will submit to the Director, before the expiration of the 72-hour period, a proposed time schedule for correcting the problem. All corrective actions will be completed in a timely manner. Until the problem is corrected, the equipment will be declared out-of-service. This will be noted on the inspection logs.

For purposes of these reporting requirements, deterioration shall be reported to the Director when it has proceeded to such an extent as to make the device inoperable or unable to function according to its intended purpose. However, all deterioration leading to this final state shall be noted on the appropriate inspection forms and reported internally so that corrective action will be taken when necessary.

If a problem is discovered during an inspection where a hazard to human heath or the environment is imminent or has already occurred, remedial action shall be taken immediately.

If a tank is determined to be unfit for use, it will be removed from service immediately and emptied. If the nitrogen blanket is removed the tank must be isolated from the fume management system.

5.0 Inspection Matrix

The items that will be inspected, the frequency of inspection, and a brief description of what is being inspected is contained in this section.

INSPECTION MATRIX

Inspection Item	Minimum Frequency	Types of Problems
Laboratory		
Lab refrigerators and freezers	Daily	Operable, correct temperature
Lab instrument eyewashes	Weekly	Operable
Lab instrument showers	Weekly	Operable
Lab sample prep eyewashes	Weekly	Operable
Lab sample prep showers	Weekly	Operable
Lab cooler storage secondary containment	Daily (when in use)	In place, empty
Lab cooler storage access	Weekly(when in use)	Adequate
Lab cooler storage containers	Weekly(when in use)	Bulging, leaking, corroding
Lab cooler storage containers	Weekly(when in use)	Proper placement
Lab cooler storage containers	Weekly(when in use)	Closed, bungs in
Lab cooler storage containers	Weekly(when in use)	Labels intact and legible
Lab cooler storage waste segregation	Weekly(when in use)	Incompatibility check
Lab cooler storage portable secondary containment	Monthly(when in use)	Visually free of damage

Inspection Item	Minimum Frequency	Types of Problems
Container Buildings (E-1, E-2, E-3, E-4, E-5, E-6, E-7, 68, 69-North, and 69-South)		
E-1 sump and sump in each bay (B-3, B-4, B-5)	Daily	Empty
E-1 sump at dock (SP-625)	Daily	Empty
E-1 loading/unloading area	Daily (when in use)	Leaks, spills
E-1 loading/unloading area	Monthly	Visually free of cracks, gaps, damage
E-1 debris drum	Weekly	Closed, labeled, dated, <90 days
E-1 aisles	Weekly	Adequate
E-1 containers	Weekly	Bulging, leaking, corroding
E-1 containers	Weekly	Proper placement and stacking
E-1 containers	Weekly	Closed, bungs in
E-1 containers	Weekly	Labels intact and legible
E-1 pallets	Weekly	Provide 4" clearance
E-1 eyewashes	Weekly	Operable
E-1 showers	Weekly	Operable
E-1 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-1 waste segregation	Weekly	Incompatible check
E-1 floor, berms	Monthly	Visually free of cracks, gaps, damage
E-1 carbon filters	Weekly	Operable, carbon level, free of plugging, breakthrough

Inspection Item	Minimum Frequency	Types of Problems
~~E-2 sumps~~	~~Daily~~	~~Empty~~
E-2 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-2 aisles	Weekly	Adequate
E-2 containers	Weekly	Bulging, leaking, corroding
E-2 containers	Weekly	Proper placement and stacking
E-2 containers	Weekly	Closed, bungs in
E-2 containers	Weekly	Labels intact and legible
E-2 pallets	Weekly	Provide 4" clearance
E-2 eyewashes	Weekly	Operable
E-2 showers	Weekly	Operable
E-2 waste segregation	Weekly	Incompatible check
E-2 floor, berms	Monthly	Visually free of gaps, cracks, damage
E-2 repack carbon filter	Weekly	Operable, carbon level, free of plugging, breakthrough
~~E-3 sumps~~	~~Daily~~	~~Empty~~
E-3 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-3 aisles	Weekly	Adequate
E-3 containers	Weekly	Bulging, leaking, corroding
E-3 containers	Weekly	Proper placement and stacking
E-3 containers	Weekly	Closed, bungs in
E-3 containers	Weekly	Labels intact and legible

Inspection Item	Minimum Frequency	Types of Problems
E-3 pallets	Weekly	Provide 4" clearance
E-3 eyewashes	Weekly	Operable
E-3 showers	Weekly	Operable
E-3 waste segregation	Weekly	Incompatible check
E-3 floor, berm	Monthly	Visually free of cracks, gaps, damage
E-4 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-4 aisles	weekly	Adequate
E-4 containers	Weekly	Bulging, leaking, corroding
E-4 containers	Weekly	Proper placement and stacking
E-4 containers	Weekly	Closed, bungs in
E-4 containers	Weekly	Labels intact and legible
E-4 pallets	Weekly	Provide 4" clearance
E-4 eyewashes	Weekly	Operable
E-4 showers	Weekly	Operable
E-4 decant eyewash/shower	Weekly	Operable
E-4 repack eyewash/shower	Weekly	Operable
E-4 waste segregation	Weekly	Incompatible check
E-4 floor, berms	Monthly	Visually free of cracks, gaps, damage
E-4 sump at dock (SP-627)	Daily	Empty
E-4 loading/unloading area	Daily (when in	Leaks, spills

Inspection Item	Minimum Frequency	Types of Problems
	use)	
E-4 loading/unloading area	Monthly	Visually free of cracks, gaps, damage
E-4 decant LEL/O_2/HCN/H_2S alarms	Monthly	Calibrate, alarms audible
E-4 repack LEL/O_2/HCN/H_2S alarms	Monthly	Calibrate, alarms audible
E-4 decant LEL/O_2/HCN/H_2S alarms	Weekly	Instruments operable
E-4 repack LEL/O_2/HCN/H_2S alarms	Weekly	Instruments operable
E-4 decant carbon filters	Weekly	Operable, carbon level, free of plugging, breakthrough
E-4 repack carbon filters	Weekly	Operable, carbon level, free of plugging, breakthrough
E-5 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-5 aisles	Weekly	Adequate
E-5 containers	Weekly	Bulging, leaking, corroding
E-5 containers	Weekly	Proper placement and stacking
E-5 containers	Weekly	Closed, bungs in
E-5 containers	Weekly	Labels legible and intact
E-5 pallets	Weekly	Provide 4" clearance
E-5 eyewashes	Weekly	Operable
E-5 showers	Weekly	Operable
E-5 waste segregation	Weekly	Incompatibility check
E-5 floor, berms	Monthly	Visually free of cracks, gaps, damage
E-5 sump and sump in each bay (B-1, B-2, B-6)	Daily	Empty

Inspection Item	Minimum Frequency	Types of Problems
E-5 sump at dock (SP-619)	Daily	Empty
E-5 loading/unloading area	Daily (when in use)	Leaks, spills
E-5 loading/unloading area	Monthly	Visually free of cracks, gaps, damage
E-5 carbon filter	Weekly	Operable, carbon level, free of plugging, breakthrough
~~E-6 sumps~~	~~Daily~~	~~Clean and dry~~
E-6 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-6 aisles	Weekly	Adequate
E-6 containers	Weekly	Bulging, leaking, corroding
E-6 containers	Weekly	Proper placement and stacking
E-6 containers	Weekly	Closed, bungs in
E-6 containers	Weekly	Labels intact and legible
E-6 pallets	Weekly	Provide 4" clearance
E-6 eyewashes	Weekly	Operable
E-6 shower	Weekly	Operable
E-6 waste segregation	Weekly	Incompatibility check
E-6 floor, berm	Monthly	Visually free of cracks, gaps, damage
~~E-7 sumps~~	~~Daily~~	~~Empty~~
E-7 aisles	Weekly	Adequate
E-7 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible

Inspection Item	Minimum Frequency	Types of Problems
E-7 containers	Weekly	Bulging, leaking, corroding
E-7 containers	Weekly	Proper placement and stacking
E-7 containers	Weekly	Closed, bungs in
E-7 containers	Weekly	Labels intact and legible
E-7 pallets	Weekly	Provide 4" clearance
E-7 eyewashes	Weekly	Operable
E-7 showers	Weekly	Operable
E-7 waste segregation	Weekly	Incompatibility check
E-7 floor	Monthly	Visually free of gaps, cracks, damage
E-7 LEL Alarm	Monthly	Calibrate, alarm audible
E-7 LEL Alarm	Weekly	*Instrument operable*
Building 68 secondary containment including tank T-611	Daily (when in use)	Empty
Building 68 doors	Daily (when in use)	Operational check
Building 68 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Building 68 containers	Weekly	Bulging, leaking, corroding
Building 68 containers	Weekly	Proper placement and stacking
Building 68 containers	Weekly	Closed, bungs in

Inspection Item	Minimum Frequency	Types of Problems
Building 68 containers	Weekly	Labels intact and legible
Building 68 pallets	Weekly	Provide 4" clearance
Building 68 waste segregation	Weekly	Incompatibility check
Building 68 floor, berm	Monthly	Visually free of gaps, cracks, damage
Buildings 69-North/69-South secondary containment	Daily (when in use)	Empty
Buildings 69-North/69-South doors	Daily (when in use)	Operational check
Buildings 69-North/69-South alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Buildings 69-North/69-South containers	Weekly	Bulging, leaking, corroding
Buildings 69-North/69-South containers	Weekly	Proper placement and stacking
Buildings 69-North/69-South containers	Weekly	Closed, bungs in
Buildings 69-North/69-South containers	Weekly	Labels intact and legible
Buildings 69-North/69-South pallets	Weekly	Provide 4" clearance
Buildings 69-North/69-South waste segregation	Weekly	Incompatibility check
Buildings 69-North/69-South floor, berm	Monthly	Visually free of gaps, cracks, damage
Breezeway		
Breezeway sump SP-626	Daily	Empty
Breezeway aisles	Weekly	Adequate

Inspection Item	Minimum Frequency	Types of Problems
Breezeway eyewash	Weekly	Operable
Breezeway shower	Weekly	Operable
Breezeway alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Breezeway floor, berms	Monthly	Visually free of cracks, gaps, damage
Breezeway containers	Weekly	Bulging
Breezeway containers	Weekly	Leaking, corroding
Breezeway containers	Weekly	Closed, bungs in
Breezeway containers	Weekly	Labels intact and legible
Breezeway waste segregation	Weekly	Incompatibility check
Breezeway pallets	Weekly	Provide 4" clearance
E-1, E-5, E-4 Receiving Docks - Refrigerated Trailers and Containers		
Refrigerated trailer containers	Weekly(when in use)	Bulging, leaking, corroding
Refrigerated trailer containers	Weekly(when in use)	Proper placement and stacking
Refrigerated trailer containers	Weekly(when in use)	Closed, bungs in
Refrigerated trailer containers	Weekly(when in use)	Labels intact and legible
Refrigerated trailer pallets	Weekly(when in use)	Provide 4" clearance
Refrigerated trailer aisles	Weekly(when in use)	Adequate

Inspection Item	Minimum Frequency	Types of Problems
Refrigerated trailers	Daily(when in use)	Temperature ≤□ 40 °F
E-1, E-5, E-4 receiving dock aisles and access	Weekly(when in use)	Adequate
E-1, E-5, E-4 receiving dock containers	Weekly(when in use)	Bulging, leaking, corroding
E-1, E-5, E-4 receiving dock containers	Weekly(when in use)	Proper placement
E-1, E-5, E-4 receiving dock containers	Weekly(when in use)	Covered/closed, bungs in
E-1, E-5, E-4 receiving dock containers	Weekly(when in use)	Labels intact and legible
E-1, E-5, E-4 receiving dock pallets	Weekly(when in use)	Provide 4" clearance
E-1, E-5, E-4 receiving dock waste segregation	Weekly(when in use)	Incompatible check
E-1, E-5, E-4 receiving dock secondary containment	Monthly	Visually free of cracks, gaps, damage
Gas cylinder storage area		
Cylinder storage area cylinders	Daily(when in use)	Bulging, leaking, corroding
Cylinder storage area cylinders	Weekly(when in use)	All cylinders capped
Cylinder storage area cylinders	Weekly(when in use)	Barcodes/labels intact and legible

Inspection Item	Minimum Frequency	Types of Problems
Cylinder storage area segregation	Weekly(when in use)	Incompatibility check
Cylinder storage area	Weekly(when in use)	All barriers and signs in place
Cylinder storage area	Weekly(when in use)	Area clear of combustible waste and vegetation
Gas cylinder feed station		
Cylinder feed station cylinders	Daily(when in use)	Bulging, leaking, corroding
Cylinder feed station cylinders	Weekly(when in use)	All cylinders capped
Cylinder feed station cylinders	Weekly(when in use)	Barcodes/labels intact and legible
Cylinder feed station fittings	Daily (when in use)	Leaks, visible damage
Cylinder feed station hoses	Daily (when in use)	Leaks, visible damage
Cylinder feed station lance assembly	Daily (when in use)	Leaks, visible damage
~~Cylinder feed station shower/eyewash~~	~~Weekly~~	~~Operable~~
Cylinder feed station LEL Alarm	Monthly(when in use)	Calibrate, alarm audible
Cylinder feed station LEL Alarm	Weekly(wh	Instrument operable

Inspection Item	Minimum Frequency	Types of Problems
	en in use)	
Gas cylinder feed station glove box		
Cylinder feed station glove box doors, north	Daily (when in use)	Leaks, visible damage
Cylinder feed station glove box doors, north	Weekly(when in use)	Operational check
Cylinder feed station glove box doors, south	Daily (when in use)	Leaks, visible damage
Cylinder feed station glove box doors, south	Weekly(when in use)	Operational check
Cylinder feed station glove box seals	Daily (when in use)	Leaks, visible damage
Cylinder feed station glove box lexan	Daily (when in use)	Leaks, visible damage
Cylinder feed station glove box safety latches, north	Daily (when in use)	Visible damage
Cylinder feed station glove box safety latches, south	Daily (when in use)	Visible damage
Cylinder feed station glove box lance assembly	Daily (when in use)	Leaks, visible damage

Inspection Item	Minimum Frequency	Types of Problems
Drum pumping storage		
Drum pumping storage secondary containment	Daily (when in use)	In place, empty
Drum pumping storage barriers	Daily (when in use)	In place, damage
Drum pumping storage aisles and access	Weekly	Adequate
Drum pumping storage containers	Weekly(when in use)	Bulging, leaking, corroding
Drum pumping storage containers	Weekly(when in use)	Proper placement
Drum pumping storage containers	Weekly(when in use)	Closed, bungs in
Drum pumping storage containers	Weekly(when in use)	Labels intact and legible
Drum pumping storage waste segregation	Weekly(when in use)	Incompatibility check
Drum pumping storage portable secondary containment	Monthly(when in use)	Visually free of damage
Drum pumping storage pad	Monthly	Check for cracks, damage
Drum pumping station		
Drum pumping station containers/educt system and waste feed system pump and piping integrity	Hourly (when in use)	Spill control equipment, corrosion, erosion, other damage/deterioration, releases, gauge readings
Drum pumping station secondary containment	Daily (when in use)	Empty

Inspection Item	Minimum Frequency	Types of Problems
Drum pumping station containers	Weekly(when in use)	Bulging, leaking, corroding
Drum pumping station containers	Weekly(when in use)	Closed, bungs in
Drum pumping station containers	Weekly(when in use)	Labels intact and legible
Drum pumping station containers	Weekly(when in use)	Incompatibility check
Drum pumping station secondary containment	Monthly	Check for cracks/gaps/damage
Drum pumping station LEL Alarm	Weekly	Instrument operable
Drum pumping station LEL Alarm	Monthly	Calibrate, alarm audible
CO_2 fire suppression system	Daily (when in use)	Isolation valve open, cylinder charged and connected
Drum pumping station glove box doors	Daily (when in use)	1" WC vacuum, visible damage
Drum pumping station glove box lexan	Daily (when in use)	1" WC vacuum, visible damage
Drum pumping station glove box seals	Daily (when in use)	1" WC vacuum, visible damage
Drum pumping station grounding	Daily (when in use)	Good connections, deterioration
Direct Burn Vessel/Direct Burn Tanker Systems and Container Storage/Direct Burn Corrosive System		

Inspection Item	Minimum Frequency	Types of Problems
Direct burn vessel and piping integrity	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Direct burn vessel berm floor and berm	Monthly	Check for cracks/gaps/damage
Direct burn vessel interior inspection	Annual(when in use)	Inspect *interior* of each direct burn vessel for pitting, corrosion, general condition, thickness
Drive through direct burn tanker, piping integrity and pump system	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Drive through direct burn station secondary containment	Monthly	Check for cracks/gaps/damage
Drive through direct burn tankers/containers	Weekly (when not in use)	Leaking, deterioration
Drive through direct burn station	Daily (when in use)	Check for the presence of combustible debris
Drive through direct burn station eyewash	Weekly	Operable
Drive through direct burn station shower	Weekly	Operable
Truck unloading direct burn tanker, piping integrity and pump system	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Truck unloading direct burn station secondary containment	Monthly	Check for cracks/gaps/damage
Truck unloading direct burn tankers	Weekly (when not in use)	Leaking, deterioration
Truck unloading direct burn station	Daily	Check for the presence of combustible debris

Inspection Item	Minimum Frequency	Types of Problems
	(when in use)	
Truck unloading direct burn station eyewash	Weekly	Operable
Truck unloading direct burn station pad shower	Weekly	Operable
Truck unloading aisles and access	Weekly(when in use)	Adequate
Truck unloading containers	Weekly(when in use)	Bulging, leaking, corroding
Truck unloading containers	Weekly(when in use)	Proper placement and stacking
Truck unloading containers	Weekly(when in use)	Closed, bungs in
Truck unloading containers	Weekly(when in use)	Labels intact and legible
Truck unloading pallets	Weekly(when in use)	Provide 4" clearance
Truck unloading waste segregation	Weekly(when in use)	Incompatibility check
Drive through corrosive direct burn tanker/tote, piping integrity and pump system	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Drive through corrosive direct burn station secondary containment	Monthly	Check for cracks/gaps/damage
Drive through corrosive direct burn tanker/tote	Weekly (when not in use)	Leaking, deterioration
	Daily	

Inspection Item	Minimum Frequency	Types of Problems
Drive through corrosive direct burn station	(when in use)	Check for the presence of combustible debris
Drive through corrosive direct burn station eyewash	Weekly	Operable
Drive through corrosive direct burn station shower	Weekly	Operable
Drive through corrosive direct burn station *LEL/O_2/HCN/H_2S* alarms	Monthly	Calibrate, alarms audible
Drive through corrosive direct burn station LEL/O_2/HCN/H_2S alarms	Weekly	Instruments operable
Sludge Tanks T-401 and T-406		
T-401 sump SP-620	Daily	Empty
T-406 sump SP-618	Daily	Empty
T-401	Daily	Nitrogen blanket, leaking piping, waste levels
T-406	Daily	Leaking pump(s)
sludge pit O_2 instrument/alarm	Monthly	Calibrate, alarm audible
sludge pit O_2 instrument/alarm	Weekly	Instrument operable
T-401 integrity	Daily	No visible leaks, check for corrosion
T-406 integrity	Daily	No visible leaks, check for corrosion
T-401 and T-406 interior inspection	Every Four Years	Inspect interior of each tank for pitting, corrosion, general condition, thickness
T-406 berm (secondary containment system)	Monthly	Concrete free of gaps/cracks, clean
T-401 berm (secondary containment system)	Monthly	Concrete free of gaps/cracks, clean
T-401 waste level	Daily	Acceptable, record
T-406 waste level	Daily	Acceptable, record

Inspection Item	Minimum Frequency	Types of Problems
valves for T-401 & T-406	Daily	Leaks
The sludge receiving tank fixed roof and its closure devices	Annually	Check for defects such as cracks, holes, gaps, broken, cracked, or otherwise damaged seals, broken or missing hatches, access covers, caps, or other closure devices, etc.
T-406 berm eyewash	Weekly	Operable
T-406 berm shower	Weekly	Operable
Bulk Solids Tanks		
T-403 waste level	Daily	Acceptable
T-404B-East/West waste level	Daily	Acceptable
T-404A waste level	Daily	Acceptable
T-403, T404A, T-404B-East/West interior inspection	Every Four Years	Inspect interior of each tank for pitting, corrosion, general condition, thickness
Bulk Solids Tunnel		
T-403	Daily	Evidence of leak
T-404B-East/West	Daily	Evidence of leak
T-404A	Daily	Evidence of leak
Tunnel concrete	Monthly	Visually free of cracks/gaps, clean
Bulk Solids Unloading Berm/Sludge System Unloading Berm and Bulk Solids/Sludge Pad Container Storage		
Sludge pad direct burn station tankers	Weekly (when not in use)	Leaking, deterioration

Inspection Item	Minimum Frequency	Types of Problems
Sludge pad direct burn station	Daily (when in use)	Check for the presence of combustible debris
Sludge pad direct burn station Pumps (412. A,B)	Daily (when in use)	No leaks/drips observed
Sludge pad direct burn station tanker and piping integrity	Hourly (when in use)	Spill control equipment, corrosion, erosion, releases, gauge readings
Bulk solids unloading area	Daily (when in use)	Spills
Sludge unloading area	Daily (when in use)	Spills
Concrete/secondary containment	Monthly	Free of cracks/gaps, damage, clean
Sump SP-617	Daily	Empty
Alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Bulk solids/sludge pad storage barriers	Daily (when in use)	In place, free from damage
Bulk solids/sludge pad aisles	Weekly (when in use)	Adequate

Inspection Item	Minimum Frequency	Types of Problems
Bulk solids/sludge pad containers	Weekly (when in use)	Bulging, leaking, corroding
Bulk solids/sludge pad containers	Weekly (when in use)	Proper placement
Bulk solids/sludge pad containers	Weekly (when in use)	Covered/closed, bungs in
Bulk solids/sludge pad containers	Weekly (when in use)	Labels intact and legible
Bulk solids/sludge pad pallets	Weekly (when in use)	Provide 4" clearance
Bulk solids/sludge pad waste segregation	Weekly (when in use)	Incompatible check
Truck Unloading (E-14)		
Truck unloading areas	Daily (when in use)	Spills
West bay concrete	Monthly	Visually free of cracks/gaps/damage
Middle bay concrete	Monthly	Visually free of cracks/gaps/damage
E-14 sumps (3)	Daily	Empty
Sump SP-309	Daily	Empty

Inspection Item	Minimum Frequency	Types of Problems
Hoses/fittings	Daily	Good condition
Piping	Daily	No leaks observed from truck unloading to tank farm
Pumps (P302A,B,~~C~~)	Daily	No leaks/drips observed
Alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
Truck unloading LEL alarms	Monthly	Calibrate, alarms audible
Truck unloading LEL alarms	Weekly	Instrument operable
Eyewashes	Weekly	Operable
Showers	Weekly	Operable
Thaw Shed		
Spill Kit	Quarterly	Verify contents
Fire Station		
Spill Kit	Quarterly	Verify contents
Container Building		
Spill Kit	Quarterly	Verify contents
Tank Farm Pump Houses (E-15 and E-16)		
E-15 sump	Daily	Empty
P306A	Daily	Check for leaking
P306B	Daily	Check for leaking
P303A, B	Daily	Check for leaking
E-15 nitrogen blankets for T-301 through T-324	Daily	Blanket present

Inspection Item	Minimum Frequency	Types of Problems
E-15 piping and headers	Daily	Check for leaking, empty drip pans
E-15 containment area	Daily	Spills
E-15 eyewash	Weekly	Operable
E-15 shower	Weekly	Operable
E-15 containers	Weekly	Closed container; label is current; no leaks; <90 days
E-15 concrete floor	Monthly	Free of cracks/gaps/damage
E-15 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible
E-15 LEL alarms	Monthly	Calibrate, alarms audible
E-15 LEL alarms	Weekly	Instrument operable
E-16 sump	Daily	Empty
P304A	Daily	Check for leaking
P304B	Daily	Check for leaking
P312	Daily	Check for leaking
E-16 piping and headers	Daily	Check for leaking, empty drip pans
E-16 containment area	Daily	Spills
E-16 eyewash	Weekly	Operable
E-16 shower	Weekly	Operable
E-16 containers	Weekly	Closed container; label is current; no leaks; <90 days
E-16 concrete floor	Monthly	Free of gaps/cracks/damage
E-16 alarms (plant alarms for fire, evacuation, and paging system)	Weekly	Alarms audible

Inspection Item	Minimum Frequency	Types of Problems
B-16 LEL alarms	Monthly	Calibrate, alarms audible
B-16 LEL alarms	Weekly	Instrument operable
Tank Farm (T-301-312 and T-321-324)		
T-301-312 and T-321-324 seal pots and overflows	Daily	Check level of liquid and signs of waste
T-301-312 and T-321-324 integrity	Daily	Check if tank is leaking, check for corrosion
T-301-312 and T-321-324 tank temperatures, waste levels, valve positions	Daily	Acceptable, record
T-301-304, T-305-308, T-309-312, and T-321-324 berm floors	Monthly	Check for cracks/gaps/damage
T-301-304, T-305-308, T-309-312, and T-321-324 berm walls	Monthly	Check for cracks/gaps/damage
T-301-312 and T-321-324 interior inspection	Annual	Inspect interior of each tank for pitting, corrosion, general condition, thickness
Sumps SP-310A, B, C, and D	Daily	Empty
lower T-323-324 shower/eyewash	Weekly	Operable
upper T-322-321 shower/eyewash	Weekly	Operable
lower T-303-304 shower/eyewash	Weekly	Operable
upper T-303-304 shower/eyewash	Weekly	Operable
lower T-309-310 shower/eyewash	Weekly	Operable
upper T-309-310 shower/eyewash	Weekly	Operable
Tank Farm Carbon Canister Fume Management System		
condensation traps	Weekly	liquid accumulation
hydrocarbon sensor ports	3 hrs (when in use)	Breakthrough

Inspection Item	Minimum Frequency	Types of Problems
carbon canisters	3 hrs (when in use)	Temperature
Combustion Air System Inspection		
Shredder vent duct	Daily	Check for presence of dust or liquids
Bulk solids building vent	Daily	Check for presence of dust or liquids
North ABC combustion air duct	Daily	Check for presence of dust or liquids
South ABC combustion air duct	Daily	Check for presence of dust or liquids
Kiln combustion air silencer	Daily	Check for presence of dust or liquids
Drain valves/traps, Bottom of kiln, Combustion air silencer	Daily	Open and drain any liquids; record amount drained
Sludge X309~~X122~~	Daily	Open, drain, record
Decant X308~~X121~~	Daily	Open, drain, record
Kiln X310~~120~~	Daily	Open, drain, record
Trap X311	Daily	Open, drain, record
The closed vent system between the bulk solids building, the shredder, the apron feeder, the sludge receiving tank and the inlet to the ID fans (both kiln/ABC combustion air fans and the carbon adsorption system ID fan)	Annually	Check for leaks, holes, gaps, loose connections, etc. that could lead to emissions
The duct work sections between the carbon adsorption system ID fan (K-401) and the carbon adsorbers, and between the combustion air fans (K-101 and K-102A/B) and the incinerator	Annually	No detectable emissions (Method 21), defects that could lead to emissions
Carbon Adsorption Vessels F-412A/B	Annually	Check for leaks, holes, gaps, that could cause emissions
Kiln Area		
Kiln/ABC berm	Daily	Clean; free of spills

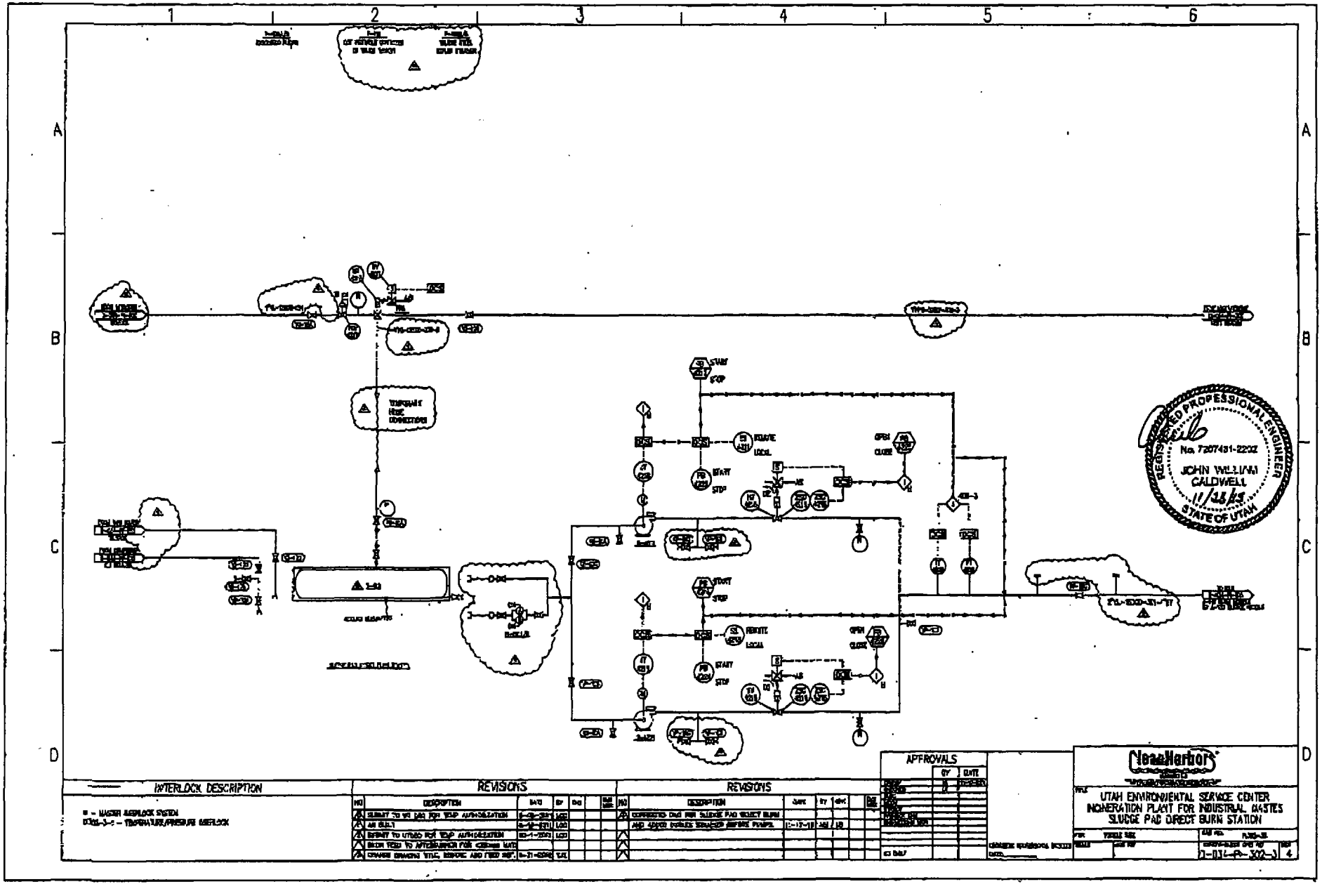
Inspection Item	Minimum Frequency	Types of Problems
Kiln/ABC and associated equipment (including feed conveyors, deslagger, piping, etc.)	Daily	Fugitive emissions, deterioration, excessive wear, signs of tampering, leaks, spills
Sump SP-624	Daily	Empty
Sump SP-615	Daily	Empty
Eyewashes	Weekly	Operable
Showers	Weekly	Operable
Slag Pad Area		
Sumps SP-623A/B	Daily	Empty
Eyewash	Weekly	Operable
Shower	Weekly	Operable
Wet End I Area		
Sump SP-629	Daily	Empty
Sump SP-614B	Daily	Empty
Sump in dust loadout	Daily	Empty
Wet End I equipment (pumps, piping, valves, tanks, etc.)	Daily	Fugitive emissions, deterioration, excessive wear, signs of tampering, leaks, spills
Sump SP-614A	Daily	Empty
Eyewashes	Weekly	Operable
Showers	Weekly	Operable
Wet End II Area		
Soda Ash Sump SP-614D	Daily	Empty

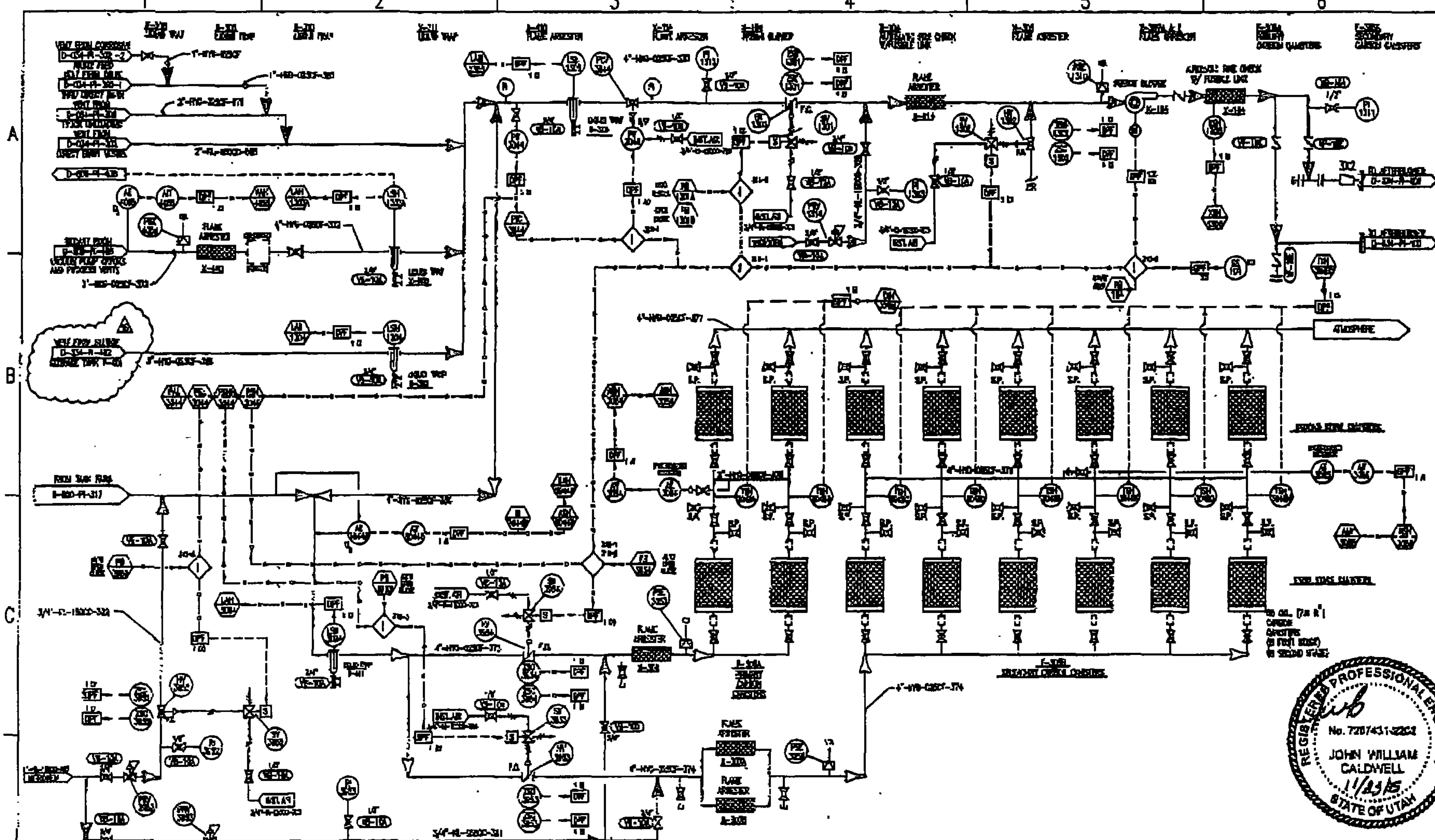
Inspection Item	Minimum Frequency	Types of Problems
Sump SP-616	Daily	Overflowing, pump operable
WESP Sump SP-614C	Daily	Empty
Wet End II equipment (pumps, piping, valves, tanks, etc.)	Daily	Fugitive emissions, deterioration, excessive wear, signs of tampering, leaks, spills
Eyewashes	Weekly	Operable
Showers	Weekly	Operable
CEM system	Daily	Sample transport and interface system, CEMS calibration data
Emergency Equipment		
Emergency Generator	Weekly	Start generator, operable, check oil & gas
primary electric fire pump	Weekly	Start pump, operable
secondary diesel fire pump	Weekly	Start pump, operable
Safety and Security		
Fence	Weekly	All gates closed and locked, poles upright, no holes that would allow unauthorized entry
Warning signs	Weekly	Are signs secured to fence? Are signs visible and legible?
perimeter lighting	Weekly	Check for lights working
all fire extinguishers plant wide	Monthly	Tagged, charged, in place, damaged
evacuation drills	Quarterly	Check for proper response
Instrumentation		
kiln temperature TT 1005 A,B,C	Daily	Good working order, out of tolerance, recording properly
ABC temperature TE/TT 1009 A,B,C	Daily	Good working order, out of tolerance, recording properly

Inspection Item	Minimum Frequency	Types of Problems
Stack CO AE/AT 2199 A,B,C	Daily	Good working order, out of tolerance, recording properly
Gas velocity FE/FT 2195	Daily	Good working order, out of tolerance, recording properly
combustion zone pressure PIT 1006 A,B,C	Daily (when in operation)	Good working order, out of tolerance, recording properly
baghouse pressure drop PIT 2020 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
Activated carbon feed rate WT 2037 RL	Daily (when in operation)	Good working order, out of tolerance, recording properly
1st stage flow FT 2092A/B	Daily (when in operation)	Good working order, out of tolerance, recording properly
2nd stage flow FT 2095A/B	Daily (when in operation)	Good working order, out of tolerance, recording properly
1st stage pH AE/AT 2104 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
2nd stage pH AE/AT 2130 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
2nd stage effluent pH AE/AT 2129 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
saturator flow FT 2081A/B	Daily (when in	Good working order, out of tolerance, recording properly

Inspection Item	Minimum Frequency	Types of Problems
	operation)	
spray dryer gas temperature TE/TT 2001 A,B,C	Daily (when in operation)	Good working order, out of tolerance, recording properly
saturator gas temperature TE/TT 2082 A,B,C	Daily (when in operation)	Good working order, out of tolerance, recording properly
hot duct O_2 AT 1010 A,B	Daily (when in operation)	Good working order, out of tolerance, recording properly
kiln rotation ST1003	Daily (when in operation)	Good working order, out of tolerance, recording properly
secondary air pressure PT 1018	Daily (when in operation)	Good working order, out of tolerance, recording properly
Vent position ZSC 1017	Daily (when in operation)	Good working order, out of tolerance, recording properly
atomization air differential pressure PDSL 1124, 1187, 1224	Daily (when in operation)	Good working order, out of tolerance, recording properly
waste liquid pressure PSL 1119A, 1119B, 1196	Daily (when in operation)	Good working order, out of tolerance, recording properly
combustion air pressure PSL 1127, PI 1191, 1244	Daily (when in operation)	Good working order, out of tolerance, recording properly

Inspection Item	Minimum Frequency	Types of Problems
BMS operating A104M, A106AM, A106BM	Daily (when in operation)	Good working order, out of tolerance, recording properly





INTERLOCK DESCRIPTION
316-1 [illegible]
316-3 [illegible]
316-5 [illegible]

NO	DESCRIPTION	DATE	BY	CHK
1	[illegible]	[illegible]	[illegible]	
2	[illegible]	[illegible]	[illegible]	
3	[illegible]	[illegible]	[illegible]	
4	ADDED [illegible] WASTE VENT	[illegible]	[illegible]	
5	CHANGED [illegible]	[illegible]	[illegible]	

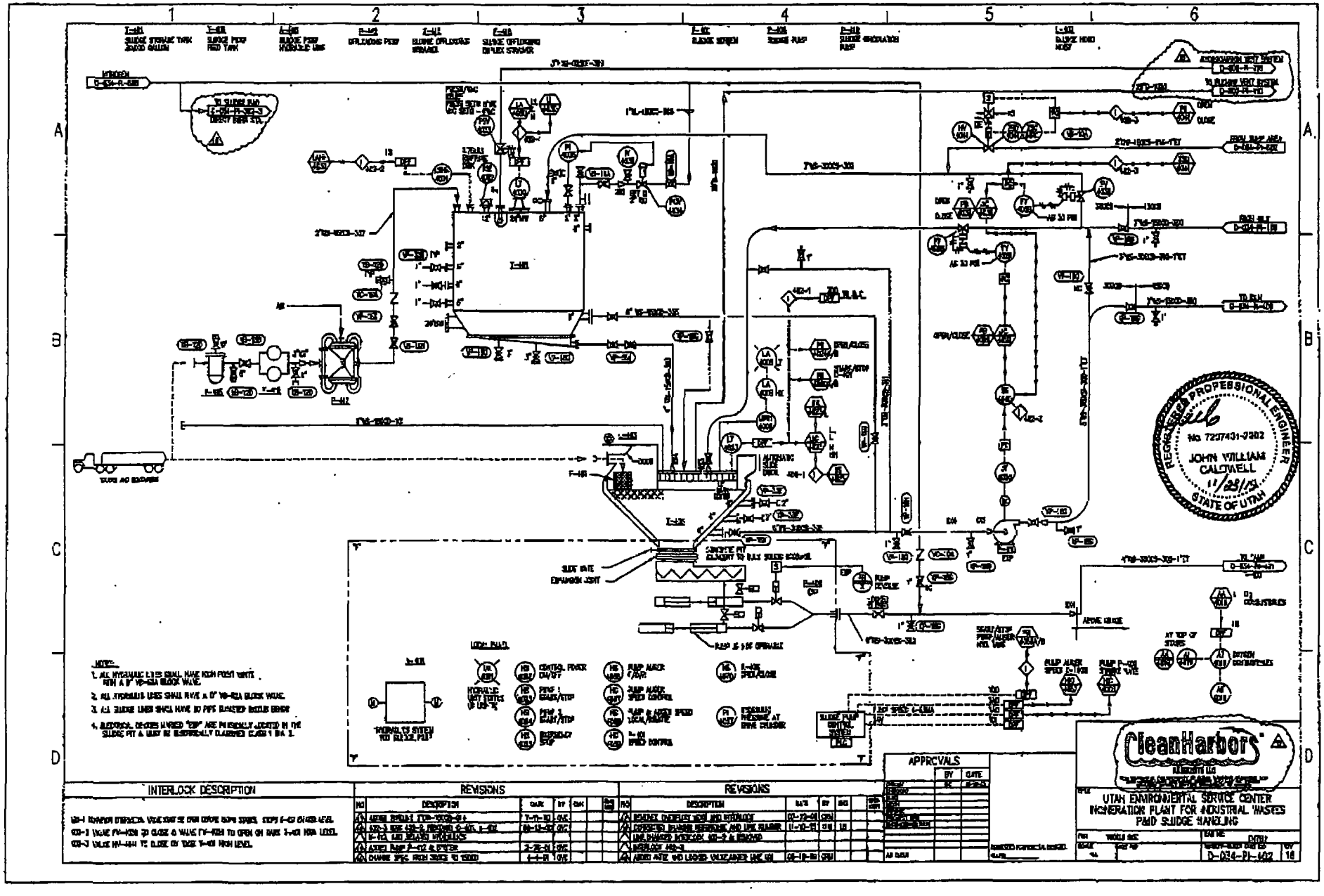
NO	DESCRIPTION	DATE	BY	CHK
[illegible]	[illegible]	11-10-15	[illegible]	[illegible]
[illegible]	AS BUILT UPDATE	[illegible]	[illegible]	
[illegible]	AS BUILT	[illegible]	[illegible]	
[illegible]	CORRECT [illegible] AS BUILT [illegible]	[illegible]	[illegible]	
[illegible]	CHANGED SAMPLING LINE TO SHOW AS BUILT	[illegible]	[illegible]	

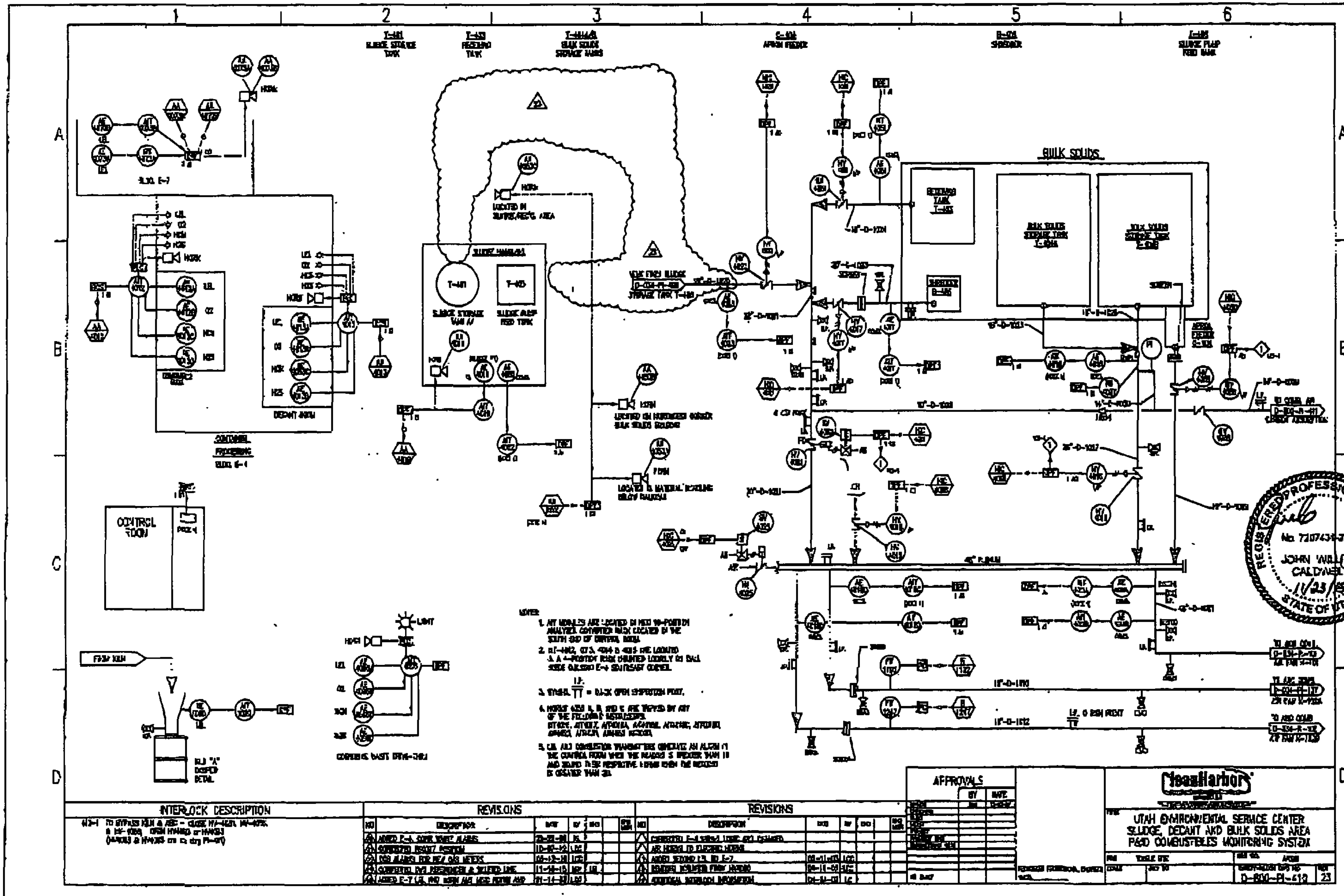
APPROVALS	BY	DATE
[illegible]	[illegible]	[illegible]

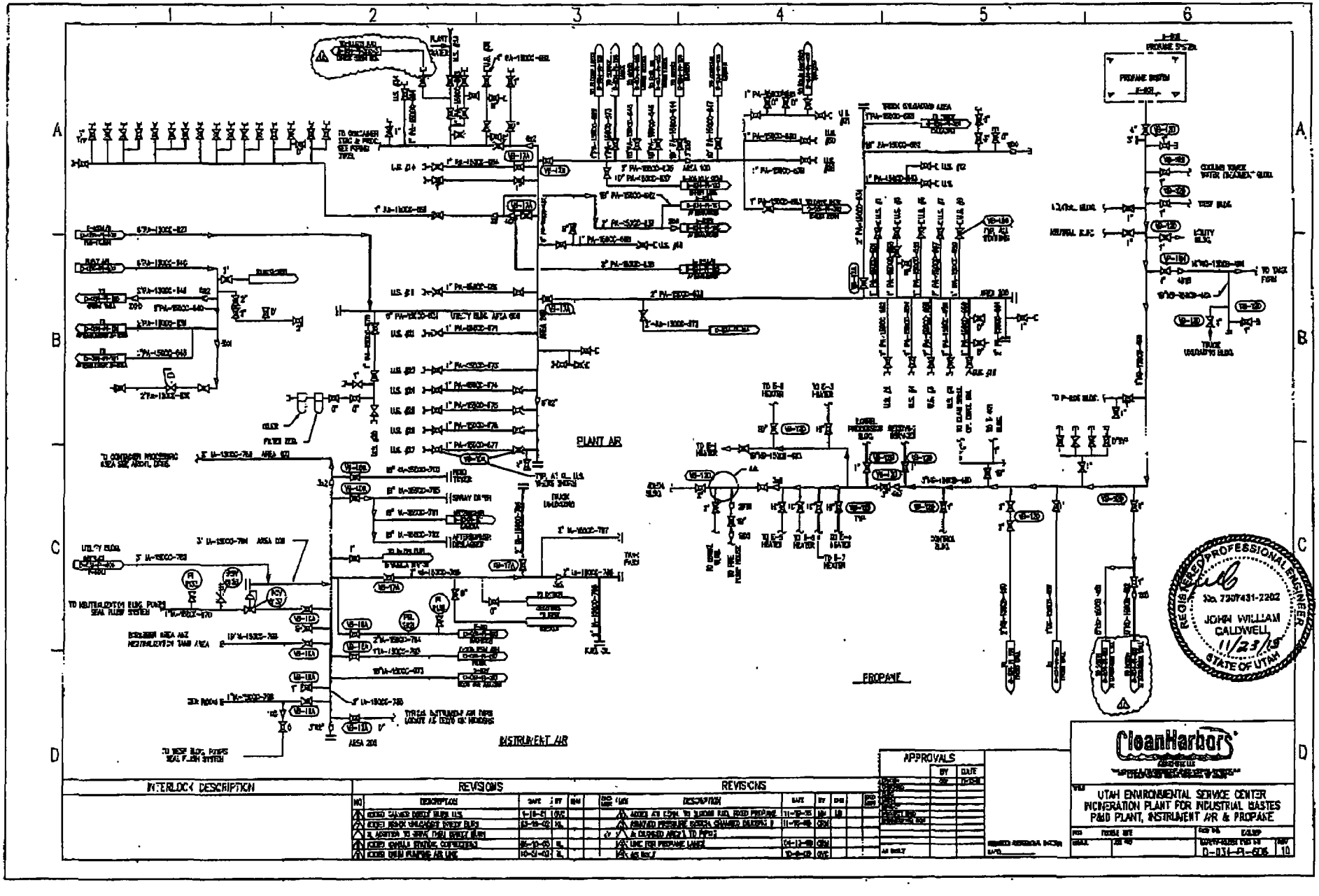
CleanHarbors

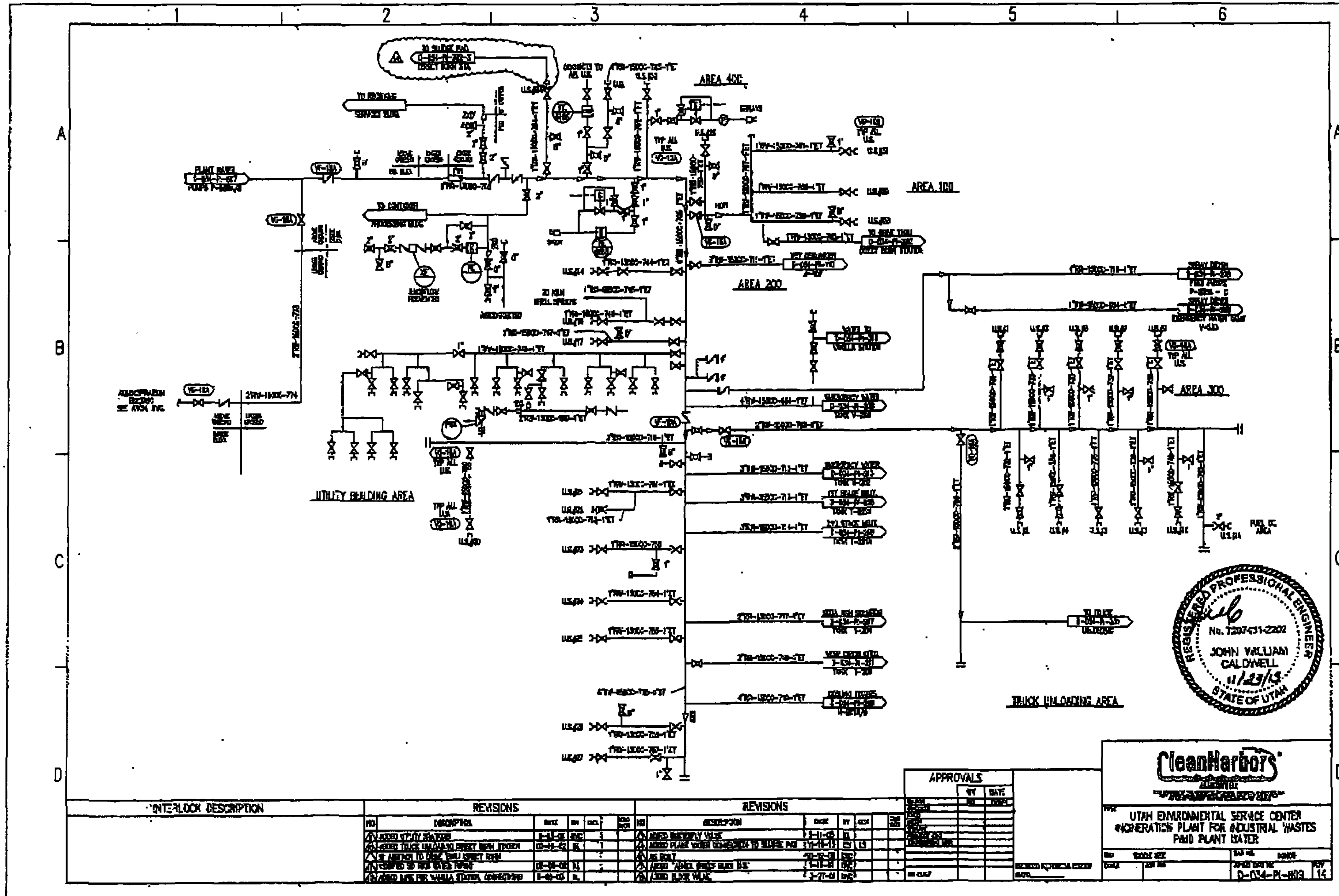
UTAH ENVIRONMENTAL SERVICE CENTER
INCINERATION PLANT FOR INDUSTRIAL WASTES
P&ID HYDROCARBON VENT SYSTEM

D-300-PI-316




BULK SOLIDS
CONTROL ROOM
NOTES:
INTERLOCK DESCRIPTION
REVISIONS
APPROVALS
BY
DATE
CleanHarbors
UTAH ENVIRONMENTAL SERVICE CENTER
SLUDGE, DECANT AND BULK SOLIDS AREA
P&ID COMBUSTIBLES MONITORING SYSTEM
D-800-PI-413
23




AREA 400
AREA 100
AREA 200
AREA 300
UTILITY BUILDING AREA
TRUCK UNLOADING AREA
INTERLOCK DESCRIPTION
REVISIONS
REVISIONS
APPROVALS
CleanHarbors
UTAH ENVIRONMENTAL SERVICE CENTER
INCINERATION PLANT FOR INDUSTRIAL WASTES
P&ID PLANT WATER
D-034-PI-003
14
REGISTERED PROFESSIONAL ENGINEER
No. 7207431-2202
JOHN WILLIAM CALDWELL
11/23/15
STATE OF UTAH

Clean Harbors Aragonite, LLC.
11600 N Aptus Road
P.O. Box 1339
Aragonite, UT 84029

PUBLIC NOTICE

Notice is hereby given that Clean Harbors, Aragonite, LLC ("CHA"), State EPA ID Number UTD981552177, has submitted a request to the Utah Division of Waste Management & Radiation Control Department for the Temporary Authorization and Class 2 modification to operate a direct burn system that would allow the facility to pump tankers of hazardous waste direct to incinerator from the bulk solids/sludge pad.

A 60 day public comment period for this Class 2 modification request will begin on November 27, 2015 and end on January 25, 2015. All comments must be submitted in writing to Mr. Scott Anderson, Director, Utah Division of Waste Management & Radiation Control Department of Environmental Quality, Multi-Agency State Office Building, 195 North 1950 West, Salt Lake City, Utah, 84116.

CHA will conduct a public information meeting concerning this modification request on Thursday, December 10, 2015 at 5:00 PM at the Grantsville Public Library (Medium Conference Room), 42 North Bowery Street, Grantsville, UT.

Questions regarding this modification may be directed to CHA by contacting Mr. Lonnie Brown at (435) 884-8170; or the Utah Division of Waste Management & Radiation Control Department, by contacting Mr. Boyd Swenson at (801) 536-0232 or Mr. Rick Page at (801) 536- 0230. The Permittee's compliance history is also available from Mr. Swenson.

A copy of this modification request is available for review by the general public at the Utah Department of Environmental Quality, Utah Division of Waste Management & Radiation Control Department, Multi-Agency State Office Building, 195 North 1950 West, Salt Lake City, Utah.

Note for Media Addresses: This notice is for informative purposes in accordance with the requirements of the Utah Department of Environmental Quality, Utah Division of Waste Management & Radiation Control Department; and not a request for publication.