ATTACHMENT 8

WASTE STORAGE, PROCESSING, AND TRACKING

Attachment 8
Waste Storage, Processing, and Tracking

Table of Contents

1.0 Introduction

This Attachment outlines specific requirements for the management of wastes prior to incineration at the Clean Harbors Aragonite (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, Aragonite may temporarily (ten days or less) hold wastes manifested to another facility similarly to what is allowed in Utah Administrative Code (UAC) R315-263-12. This will be referred to as transfer operations. These containers will not be accepted to Aragonite, and as such they are not subject to the normal waste acceptance processes (e.g., profile approval, fingerprint analysis, etc.). Transfer containers will be clearly identifiable as transfer wastes and may only be held in rows in Buildings E-1, E-5, and E-8 which have been designated as being in transfer mode by prominent displays. Wastes may be double-stacked and 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 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 and waste explosives, may be temporarily placed in rows, or parts of rows, in Buildings E-1, E-5, and E-8, which have been designated as reject storage locations by prominent displays 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 that have not been accepted by the facility will not remain on-site for longer than 60 days from the PREC date unless an extension has been granted by the Director of the Division of Waste Management and Radiation Control (Director). Wastes that have been accepted but are later rejected due to processing concerns will not remain on-site longer than 60 days after the date the reject determination was made 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 R315-262-20 through 23, R315-262-30 through 33, and the 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 Aragonite facility must stop, and their drivers check in at the front desk. Drivers present the manifest(s) to the Receiving Coordinator, 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 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. 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 the weight recorded at the previous facility instead of weighing each container at the Aragonite 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, E-5, and E-8 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 (typically east of the container storage buildings or along the fence east of the container storage) 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 (WAP). Sampling and analysis results are used to determine the appropriate management process(es) for the material. If a container does not already have a barcode label, one will be placed on the container 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 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. If 1.3G explosive wastes are not processed and direct feed to the incinerator initiated as outlined in this attachment, the wastes will be moved to the ATF storage magazines. 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 operating record 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 and the small sludge tank, T-406 (which includes the bulk solids/sludge pad) 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 (which is part of the bulk solids/sludge pad), 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 WAP. 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 (typically 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) 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, by 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, by placing the tanker in the truck unloading direct burn station (if not already located there) and transferring the material to tank T-413, T-414, or T-416 in the waste tracking system, by 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, or by placing (if not already located there), the tanker or bulk container on the bulk solids/sludge pad or E-1, E-5, or E-8 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. 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, 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 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.

The facility operating record 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. 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 facility operating record 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 or a waste storage area or a staging area for transfer wastes/outbound shipping, depending on the operating mode (building E-5), 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 or a waste storage area or a staging area for transfer wastes/outbound shipping, depending on the operating mode (building E-1), and two general storage areas (buildings E-2 and E-3). The central storage building contains a receiving area or a waste storage area or a staging area for transfer wastes/outbound shipping, depending on the operating mode (building E-8). 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, located north of container storage building E-5, and Buildings 70-East/West and 71-East/West, located north of container storage building E-1, 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 the shredder(s). The shred tower storage racks and conveyor will be used to stage materials to be fed to the shred tower. The drive through direct burn station, the drive through corrosive direct burn station, the truck unloading direct burn station, and the sludge pad direct burn station are used to hold tankers while their contents are being fed to the kiln/afterburner. The drive through direct burn station,

the drive through corrosive direct burn station, and the truck unloading direct burn station may also be used to store trailers or large bulk containers. 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 and store bulk liquid totes and smaller containers on pallets. 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 sludge pad direct burn station may be used to hold a tanker/tote while their contents are being fed to the kiln. The slag pad east of the bulk solids maintenance bay may be used to store bulk containers and smaller containers on containment 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-8 receiving docks may be used to store bulk containers, containers on pallets and containers in refrigerated trailers. The ATF magazines may be used to store 1.3G explosive wastes. These areas are shown on drawings D-034-M-002, D-800-M-502, 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. Containers, except compressed gas cylinders, may also be processed through the shred tower. The discharge from the shred tower is directly into the kiln.

The current operating mode (receiving or storage or transfer) of rows in Buildings E-1, E-5, and E-8 will be maintained in the operating record and prominently displayed in Buildings E-1, E-5, and E-8 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.

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 R315-265-1, which incorporates 40 CFR §265.1084(d) by reference, 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 R315-264-1086(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, 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 or taken directly to the cylinder storage area. 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.

Three ATF magazines located onsite are used to store DOT Hazard Class 1.3G and 1.4 explosive wastes. They may also be used to store/hold temporarily, unaccepted explosive waste as the facility works to resolve a discrepancy or is in the process of rejecting waste back to the customer or an alternate facility. Storage of 1.3G explosive wastes in the ATF magazines, including compatibility considerations and storage separation distances, is conducted in accordance with ATF regulations.

Incoming 1.3G explosive wastes are processed and direct feed initiated to the incinerator within 48 hours of arrival at the facility. If this processing is interrupted and delayed by more than 24 hours, the wastes will be moved to one or more of the three ATF explosive storage magazines located at the facility and feeding the affected load(s) of explosive waste to the incinerator will be rescheduled. If the rescheduled processing and feeding of 1.3G explosive wastes stored in the magazines is interrupted and delayed by more than 24 hours, the affected wastes will be moved back to the storage magazines and feeding the affected wastes to the incinerator rescheduled.

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 truck unloading direct burn station, the sludge pad direct burn station, the bulk solids/sludge pad, E-1, E-5, or E-8 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 the drive through 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 fed directly to the afterburner through A-106B-5 or the sludge pad direct burn station and fed directly to the kiln through A-101.

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 near to 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 the drive through direct burn station, the truck unloading direct burn station, or the sludge pad 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-8 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 bulk solids shredder to make a more manageable, uniform, and homogenous feed. The discharge of the bulk solids shredder is into tank T-404B-West. Material from the tanks is moved to the other tanks, to the bulk solids 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 UAC R315-261-7 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 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

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. 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 Aragonite or generated on-site and that must be shipped off-site is manifested off-site with 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 UAC R315-262 shall apply.

3.5 Off-site Shipments

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. 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 Aragonite personnel to determine the proper destination. Aragonite places storage-only material into appropriate storage areas. 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 Tnemec 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, 69, 70-East, 70-West, 71-East, and 71-West have a chemical resistant epoxy-coated sump underneath the entire length and width of each building for secondary containment. Buildings 68 and 69 also have underground tanks that are connected to the buildings' sumps providing the additional containment required due to the building's fire suppression sprinkler system. All four 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 containment system for the shred tower storage racks is designed to accommodate precipitation in addition to providing the necessary capacity for potential leaks/spills. Each rack segment has its own containment tub directly underneath it. The containment tubs drain via piping to the drive-through direct burn station. This provides extra containment capacity for the shred tower storage racks as well as a means of pumping any collected material to the tank farm.

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 Tnemec 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 Tnemec 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 shred tower equipment, including any container storage on the conveyor, is contained within containment system(s). The floors are concrete and are sloped to provide drainage of precipitation and any other leaks and spills toward sumps where it is collected. Liquids collected in the sump are collected and pumped to the tank farm and then fed to the incinerator or are otherwise managed as a hazardous waste.

The incinerator and air pollution control equipment are 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, overlaid with ¾" steel plate, that are sloped to sumps to provide drainage and containment of precipitation and any other leaks and spills. Secondary containment for the slag pad east of the bulk solids maintenance bay is provided by portable containment units. The drum pumping storage area is located east of the drum pump station also 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, drum pumping storage area, or the slag pad east of the bulk solids

maintenance bay, these areas 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-8 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.

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 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 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, center, and west 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 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

Waste transfer or treatment may be necessary prior to feeding wastes to the incinerator (e.g., to improve the burn characteristics of the charge). Liquids removed from the containers will be transferred to a permitted storage tank, a truck tanker in the drive through direct burn station, 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 following sections describe the waste processing operations that are conducted at the facility.

4.1 Decanting

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 or to a truck tanker. The Operations Manager for production or designee(s) determine where decanting will occur and to which destination the decanted material will be transferred. Decanting takes place in both the decant room and the repack room of the container processing building (building E-4) or in the drive through direct burn containment area. Waste decanted to a 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 or to another container using the equipment in the truck unloading building.

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 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 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 the following locations:

- the three workstations (WS1 through WS3) in building E-2,
- the Tipper and Decanter for sharps in building E-2,
- the repack area in building E-4, and
- E-1, E-5, E-8, and the G Row in E-2, which can be used to consolidate or repack containers as long as waste isn't exposed to the atmosphere.

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, which includes repacking aerosol cans. 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, 7) debris processing, and 8) infectious waste repackaging. 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 Aragonite methods in the WAP. Also, LEL testing on inner containers of lab packs may be necessary as required by the WAP. 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), 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 R315-268-45 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.

8) Infectious Waste Repackaging

Infectious waste that arrives in recyclable or reusable primary containers, with sealed inner containers, may be repackaged into containers destined for incineration via drum dump or direct feed to the kiln. A reusable container of infectious waste is repackaged using raised roller beds to empty the contents into containers. Using tools, operators push, guide, and direct the infectious waste to the holes and the empty containers beneath the metal tray. After being emptied, recyclable infectious waste containers are washed and decontaminated in a container washing machine located in building E-2. Wash/rinse solution from the container washing machine will be collected/contained and managed as a site-generated waste.

Infectious waste sharps in recyclable or reusable containers may be repackaged into containers destined for incineration via the Tipper and Decanter located in building E2. These machines remotely remove the lid of the container holding the sharps and tip the contents into a drum for incineration. After being emptied, the reusable infectious waste sharps containers are washed and decontaminated using the container washing machine located in building E-2. The Tipper and Decanter will also be decontaminated after each use in accordance with standard operating procedures. Wash/rinse solution from the container washing machine and materials used to decontaminate the Tipper and Decanter will be collected/contained and managed as site-generated waste.

Training is provided to all facility personnel involved in infectious waste repackaging. This training will be outlined in the facility Training Program Description and will include at a minimum, training on the Medical Waste Repack Procedure, Bio-Hazard Infectious Substances and Blood Borne Pathogens, response to infectious spills/releases, and operation of the container washing machine. Records of personnel receiving this training will be documented and maintained in the facility personnel training records.

Infectious waste repackaging is limited to WS3 and the area delineated as the "bin washing system" on drawing D-800-M-402.

9) Consolidation or Repacking of containers that doesn't involve exposing waste to the atmosphere.

Occasionally, waste is received at the facility where containers on a pallet exceed height requirements in the facility. The facility is able to consolidate and repack this waste on the receiving areas in E-1, E-5, and E-8 as long as waste is not exposed to the atmosphere.

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 Bulk Solids Building Shredding

Containers can be fed to the bulk solids 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 Operations Manager over production or designee.

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 Shred Tower System

Containers are fed to the shred tower system by a conveyor and elevator system. The container(s) and contents are shredded and conveyed directly into the kiln.

Solids, sludges, and other compatible containers identified for the shred tower process are first subject to compatibility testing review as described in Attachment 1.

Containers designated for the shred tower are grouped together on pallets or slip-sheets. These are referred to as “feed drops”. The feed drops are automatically conveyed to a nitrogen purged air lock. When the oxygen concentrations in the airlock and shred chambers are below a level that would support combustion, the material in the airlock is automatically conveyed into the first stage shredder. The contents from the first stage shredder are discharged into a second stage shredder to reduce particle size. The properly sized contents from the second stage shredder are then dual screw conveyed to a feeder auger. The feeder auger serves two purposes. The first is to generate a nitrogen flow isolation plug between the kiln and the shred system and secondly to convey the material into the kiln.

Prevention of explosion danger in the shred system is achieved by nitrogen purging the airlock and shred chambers to less than 5% oxygen.

Automated interlocks will stop the process as follows:

1) If the oxygen concentration in any shred chamber is greater than 5%, the shredders are stopped, the isolation valve between the kiln and shred system is closed, and the airlock exit door will remain closed until the oxygen concentration drops below 4.5%.

2) If the airlock oxygen concentration is greater than 5%, the airlock exit door will remain closed, not allowing the next drop to occur. Once the oxygen concentration is less than 4.5%, the exit door will be allowed to open to feed the next drop of container(s).

3) If the external LEL monitor(s) indicate greater than 10% of the LEL, the shred process will be shut down. The LEL must clear at less than 5.0% of the LEL before the shred system is allowed to restart.

4) If a fire is detected inside the shred system, all the shred systems are shutdown. This interlock requires manual reset. An automatic CO_2 fire suppression system is released into the airlock and shred chambers. In addition, if required, the operator may trip a manual water deluge to the shred chambers.

5) If the heat detector over the hydraulic system is tripped, the shred system hydraulics are shut down.

6) To facilitate the nitrogen purge in the airlock and shred chamber, the excess gases are vented via a pressure blower, through a flame arrestor, and discharged directly into the afterburner. For safe operation, if the afterburner temperature drops below 1400°F, the shred tower systems are shut down (except for the external conveyor systems).

7) The shred auger feed system will shut down on all the applicable Module 5 automatic waste feed cutoff parameters for the air pollution control systems, continuous emission monitoring system, and afterburner/kiln combustion control parameters. For the isolation valve, a timer starts at the time of the waste feed cutoff and if it exceeds one minute, the isolation valve shall automatically close for all applicable Module 5 automatic waste feed cutoff parameters.

8) The shred tower operator has PLC and local access to e-stops that shutdown the systems.

Attachment 10 has the following drawings for the shred tower system: D-034-PI-701, D-034-PI-702, D-034-PI-703, D-034-PI-704, and D-034-PI-705.

4.5 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.

4.5.1 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.

4.6 Barrel Feed Elevator 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 Operations Manager for production 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.

4.7 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 tankers or directly from the container. 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 construction materials or other wastes. In addition, direct feeding from a container reduces the need for repacking.

4.7.1 Truck Unloading Direct Burn

After a direct burn tanker is moved to 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).

4.7.2 Drive Through Direct Burn

After a direct burn tanker is moved to the drive through 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.

4.7.3 Corrosive Direct Burn

The western half of the drive through area south of the slag pad is used primarily to directly feed corrosive waste tankers or bulk liquid totes. Other bulk totes or containers on pallets may be stored in this area while a bulk liquid tote is being processed. 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.

4.7.4 Sludge Pad Direct Burn

After a direct burn tanker is moved to the sludge pad direct burn station and accepted, nitrogen is connected to the tanker to maintain a nitrogen blanket in the tanker as its contents are being fed

to the incinerator. 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).

Bulk liquid totes can also be processed from the sludge pad direct burn station using a diaphragm pump. A special fitted cap will be placed on the tote that allows a wand to be used to pump the contents and allow a nitrogen line to be attached to create a nitrogen blanket. 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).

4.7.5 Container Direct Burn (Drum Educt)

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.

4.7.6 Direct Burn Liquid Feed System

Flow to the direct burn lance from a direct burn tanker (either the drive through direct burn tanker, the truck unloading direct burn tanker, or the sludge pad direct burn tanker) is controlled and measured by a control valve and flow meter similar to the sludge system.

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 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 tanker to the incinerator, the feed lines are blown clear with nitrogen to ensure incompatible materials do not mix and react.

4.7.7 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 (either the drive through direct burn tanker, the truck unloading direct burn tanker, or the sludge pad direct burn tanker), the lines are isolated from the sludge recirculation line so that material from the direct burn tankers will not enter the sludge tanks. Since the same flow metering and feed system is used for the direct burn tankers 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 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.

4.8 Compressed Gas Feed System

The contents of compressed gas cylinders or larger compressed gas containers 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, or a larger compressed gas container will be processed next to the cylinder feed station (T-417). Only one cylinder or one larger compressed gas container can be processed at a time. Cylinders will be removed one at a time from the storage rack and placed upon a tipping mechanism (lecture bottles will be secured in a vice). If the cylinder contains a liquid, the cylinder will be tilted. The contents of the cylinder flow from the cylinder through a flow meter, then 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. Large containers, such as tankers, will be placed near the south opening of the enclosure and will be connected to the same process system as the cylinders. The contents will flow from the larger container through the flow meter, then the valve that initiates the automatic waste feed cutoff, through the control valve, and then the educator 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 the vessel's pressure.

When the cylinder or larger compressed gas container 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 at the request of the customer, since customers may request their cylinders or compressed gas containers be returned unflushed. To flush an empty cylinder or compressed gas container, the vessel 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, the vessel is reconnected to the process line and the automatic valves opened, letting the eductor draw the flush nitrogen out of the vessel until dead head vacuum is reached. This process is repeated up to three times. Water is also available for flushing empty vessels. After flushing, the vessel will be returned to the customer or the valve will be removed, and the vessel landfilled or recycled. Documentation will be maintained to show that each cylinder or larger compressed gas container was appropriately flushed. This documentation will include the vessel number (i.e., tracking 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.

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 barcode label will be placed on any containers that have been manifested to the facility and do not already have a Clean Harbors barcode. Containers manifested to another facility that are stopping at the Aragonite facility for transfer operations may also receive a Clean Harbors barcode, if not already labeled. Containers that have been accepted at the facility will have a green label or mark on the barcode label. All containers in permitted storage except the rows that are in receiving mode in buildings E-1, E-5, and E-8, the bulk solids/sludge pad and the E-1, E-5, and E-8 receiving docks prior to acceptance, and transfer wastes will have the 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 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 buildings E-6 and E-7, level three. Container inventory is tracked by row and space in buildings E-2 (except for row G), E-3, E-6 (first two levels), and E-7 (first two levels), buildings 68 and 69 (space only), buildings 70-East, 70-West, 71-East, and 71-West, and in the truck unloading direct burn station. Container inventory is tracked by row in the E-1, E-5, and E-8 buildings, building E-2, row G, bulk solids/sludge pad, E-1, E-5, and E-8 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 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 Temporary Storage Exemption for Non-Accepted Wastes

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 a barcode label 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 bar codes, 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 a missing container, 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.

Within one business day of discovery of a container that is physically present at the facility, but the waste tracking system shows it as having already been processed, Aragonite will move the container to a designated location and scan the "Zero Weight Drum" to that location and begin efforts to resolve the discrepancy. Different efforts may be used depending on the circumstances, 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 or identified as Zero Weight Drums 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 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. If the container was not pumped to RCRA empty standards, 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

5.5.1 Bulk Solids Shredder Tracking

Any containers to be shredded will have already been moved to one of the bulk solids tanks in waste tracking. After shredding, the database is updated to show the material in the new location (i.e., T-404B-West). 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 in the computerized waste tracking database.

5.5.2 Shred Tower Shredder Tracking

Materials are processed in the shred tower in "feed drops" or “sequences”. These container(s), in addition to their individual drum tracking labels, also receive a sequence label that ties their individual incineration chemistries together when they are fed. The sequence label is then scanned when the feed drop or sequence is placed on the conveyor.

Each feed drop consists of one or a group of individual containers. Each individual feed drop to the tower is scanned at the conveyor and checked against the shred tower job. If any container scanned is not on the job, the shred tower conveyors will not advance the drop, and container(s) must be removed, and the drop corrected. If the drop passes the job scan, the conveyors will allow the load to advance to the process.

When a feed drop is processed through the shred tower, all of the containers in that feed drop are incinerated in waste tracking. The containers will be tracked in the database as incinerated as they enter the upper shred chamber (i.e., after they exit the airlock).

5.6 Direct Burn Tracking

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, T-414, or T-416 (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 drive through corrosive direct burn station is identified as T-415. The waste tracking location for the sludge pad direct burn station is identified as T-412. 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. 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 WAP.

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, the sludge pad direct burn station, the E-1, E-5, or E-8 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. If a compressed gas cylinder does not already have a barcode label, one will be 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 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.

The procedures and requirements for lost containers described in Section 5.2.2 above shall also apply to compressed gas cylinders.

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. The drum pumping station is tracked in the waste tracking system as DRUMPUMP.

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.