17

ROLLINS HIGHWAY 36

MEMORANDUM

TO: Anita Cummings

FROM: Vicki Paulson Vicki Paulson

DATE: August 14. 1996

RE: Operations Narrative for the Container Storage Areas and Containment Building of the Highway 36 Land Development Company facility

---

Per a telephone conversation with Mike Higgs and Mike Fusco of Rollins Environmental Services corporate office in Deleware, I am sending you the enclosed information.

If you have any questions or require further information please call William E. Mills, Manager of Environmental Affairs and Regulatory Compliance or myself at (970) 386-2293.

Thank-you.

Highway 36 Land Development Company
Deer Trail, Colorado

Treatment Building

Design and Operation Narrative

Permit Attachment SI-1

I. APPLICABILITY

8

The Treatment Building operation will utilize eight treatment mixing basins (A-1, A-2, A-3, A-4, D-1, D-2, D-3, and D-4) and semi-continuous waste mixing equipment to treat waste material as necessary prior to secure cell disposal. The waste mixing equipment is contained in Basins B and C. Portions of Treatment Mixing Basin D may from time to time be covered or filled in to allow for either additional holding area for curing and waste treatment verification testing or access. In addition, bulk shipments of solid materials destined for direct secure cell disposal can be unloaded into these treatment mixing basins for special handling and/or waste verification testing. The eight compartmentalized treatment mixing basins (A1 through A4 and D1 through D4) have an approximate capacity of 150 cubic yards each. The two containment basins, (B and C) are 80 feet long by 20 feet wide by 10 feet in depth.
Floor area on the western portion of the Treatment Building as well as the Basin D area may be used for waste staging prior and during treatment and holding of treated waste material while treatment verification is being conducted. No more than 2400 cubic yards of waste material whether in staging, processing or holding may be retained within the Treatment Building at any point in time.

The Treatment Building Liner System was constructed with a primary liner system consisting of three feet of recompacted clay, an 80 mil HDPE synthetic liner, and a leak detection system. The secondary liner system consists of a 40 mil HDPE synthetic liner on top of three feet of recompacted clay. The treatment mixing basins and process equipment containing basins are constructed of reinforced concrete with a protective, sacrificial liner system installed inside the basins.

II. DESIGN REQUIREMENTS FOR LINER CONSTRUCTION

The Treatment Building Liner is constructed with a secondary liner system, a leak detection system, a primary liner system, and structural fill. A re-enforced concrete wall and twenty-seven inches of a concrete floor comprise the mixing basin containment. The concrete containment is lined with 0.75 inch steel on the walls and 1.0 inch steel on the floors to protect the concrete from mixing action.

A. Construction Details

1. DESIGN: Treatment mixing basins A and D are 80 feet long, 20 feet wide, and 10 feet deep and are subdivided into four compartments each. Containments B and C are 80 feet long, 20 feet wide and 10 feet deep and contain process equipment for waste sizing, reagent addition, waste mixing and conveyance. Treatment mixing basins were constructed in accordance with the construction specifications and as shown on the engineering drawings. Sequence of construction was as follows:

   a. Excavation was made to the depths shown on the drawings and in accordance with the construction specifications. The subgrades were tested to verify the capability of the soils to support the loads. Subgrade was recompacted to 95% modified Proctor Density between 3% dry to 5% wet of optimum moisture content.

   b. Upon completion of the Treatment Building excavation, a three-foot compacted secondary clay liner with a permeability equal to or less than 1×10^{-7} cm/sec was constructed on the bottom, over the recompacted subgrade and in accordance with the specifications. Clay was select fill in accordance with the construction specification. Placement and compaction of select fill shall be in accordance with the construction specification.

   c. A 40-mil HDPE liner was placed over the three feet of compacted clay secondary liner as shown on the engineered drawings and in accordance with the construction specification. Material specification and installation was the same as that for the secure disposal cell.

d. Upon completion of the secondary clay and HDPE liner, a leak detection system was constructed as shown on the engineered drawings in and in accordance with the specifications.

The base of the excavation was surveyed to confirm that a minimum 2.0 percent grade exists toward the planned leak detection sump. Prior to excavation, the Engineer checked the bottom for stability at the planned location and depth of sump.

The manifold or primary trench was excavated, lined with a geotextile, and backfilled with a perforated drainage pipe embedded in clean gravel as shown on the Drawings. A blanket of clean sand or other permeable material with a minimum thickness of 12 inches was initially placed on the base as shown on the "As-Built" drawings. The perforated manifold drainage pipe was installed into the sump from which a riser pipe was installed from the sump to the original ground surface.

The riser pipe is perforated with 1/2" perforations in the bottom; extended above the final surface elevation; properly capped for security; labeled with date, system type, and other pertinent information. The riser pipe is protected from damage due to movement of equipment as shown on the "As-Built" drawings. The top of the permeable material is covered with a geotextile material to assist in reducing the "fouling" of the sand blanket during placement of the primary clay liner.

The materials for the leak detection system include the following:

- Clean sand or other permeable material in accordance with the specifications.

- Clean gravel in accordance with the specifications.

- Trevira (6 oz/yd^2) geotextile or equivalent approved by the Engineer and as outlined in the specification.

- Perforated 4-inch diameter collection pipe as described in the construction specifications. Joints shall <u>not</u> be cemented or solvent welded. Threaded, fusion welded, or other couplings approved by the Engineer are acceptable.

- The riser pipe is described in the construction specifications. Joints are <u>not</u> cemented or solvent welded. Threaded, fusion welded, or other water tight couplings approved by the Engineer were used.

e. A primary liner consisting of 3-foot compacted clay with a permeability equal to or less than 1×10^{-7} cm/sec and an 80-mil HDPE geomembrane was installed over the leak detection system as shown on the "As-Built" Drawings and as called for in the construction specifications.

Clay was select fill and was installed in accordance with (ii) above. The 80-mil HDPE liner was installed in accordance with (iii) above.

f. A concrete containment was constructed in accordance with specifications and as shown on the "As-Builts" Drawings.

The floor and walls of the treatment mixing basin were constructed of reinforced concrete designed to withstand subsurface pressure gradients and the impact loads of the backhoe. The mixing basin containment was constructed as shown on the "As-Built" Drawings and in accordance with construction specifications.

Particular designs were considered for the concrete containment. End wall sections with reinforced and specially designed expansion joints were constructed to eliminate cracking or failure of the walls. A one (1) foot thick reinforced concrete floor was constructed around the top of the treatment mixing basins. An additional one (1) foot of reinforced concrete floor was constructed in those areas supporting heavy equipment. A reinforced concrete curb was built to prevent the backhoe from sliding into the bumper post along the edge of the treatment mixing basins. The bumper post was set in reinforced concrete piers designed for the impact loading.

2. Structural Integrity and Material Compatibility

a. All waste deposited in Treatment Mixing Basins A and D will be mixed as needed with a treatment reagent to adjust the pH of treated waste material as necessary. A steel plate liner was constructed to fit into the concrete containment. This steel liner was constructed with 0.75 inch steel plate on the side and 1.0 inch steel plate for the basin bottom. Between the steel liner and the concrete containments is an annulus for monitoring the integrity of the steel liners. The treatment mixing basins were constructed as shown on the "As-Built" Drawings and in accordance with the construction specifications.
The bottom of the basin excavation is into the weathered claystone.

b. Geotextile was Trevira (1120) or equivalent. Trevira (1120) is a nonwoven fabric composed of polyester filaments which are formed into a network such that the filaments retain their relative positions. The fabric is inert to biological degradation, most chemicals, alkalis, and acids.

c. The geomembrane is high density polyethylene as manufactured by Gundle Lining Systems, Inc. or equivalent. Specifications for installation, chemical resistance, standards specifications, technical bulletins on welding, and quality control was the same as the HDPE specification for the Secure Disposal Cells.

Moisture, density, and permeability controls were strictly complied with. Concrete construction conformed to those detailed procedures in the specifications. Special shoring of the walls was called for to relieve the stresses imposed during the backfilling operation. The concrete was tested to comply with construction specifications.

d. The most severe stress imposed on the mixing basin containment will be from the backhoe during the mixing operation. The reinforced concrete walls were designed to withstand this loading. A higher strength concrete (4000 psi at 28 days) than that required by design (3000 psi at 28 days) was specified.

3. Climate Conditions, Stress of Installation and Stress of Daily Operation

a. The treatment mixing basins are located totally within an enclosed structure; therefore, will not be subjected to or affected by extreme weather conditions.

b. Strict quality control and testing was complied with during the construction of the Treatment Building liner systems, the treatment mixing basin containments, and the treatment mixing basins.Quality control and testing of the compacted clay liner was in accordance with construction specifications. Placement and compaction of the clay liner shall comply with the procedures in construction specifications. Special reinforced concrete curbs, steel and concrete posts, and excessively thick floors with steel berm runners imbedded in the concrete floor were specified to greatly increase the structural integrity of the construction and prevent the backhoe or dump vehicles from sliding into the treatment mixing basins.

B. Foundation

1. Foundations were designed in accordance with the Foundation Soil Report prepared by Fox Consultants Inc. The design eliminates or minimizes problems with settlement, support, compression, or uplift problems.

C. Install to Cover All Surrounding Earth

1. The surrounding earth is isolated from the treatment mixing basins by:

a. A primary and secondary impermeable liner system consisting of several feet of compacted clay liners and two HDPE synthetic liner materials.

b. A leak detection system between the secondary and primary liner system which will detect a leak in the primary liner system.

c. A reinforced concrete liner around the walls and floor protects the primary and secondary liner from the stress load imposed by the backhoe, vehicles, and waste.

III. CONSTRUCTION AND MONITORING

A. Construction Specifications

The construction specifications provided for the comprehensive Quality Control/Quality Assurance, testing and inspection procedures during installation of the treatment mixing basin liners. The Engineer monitored and inspected all construction and furnished Highway 36 Land Development Company with written certification that the construction was performed in accordance with construction specifications, plans, and "As-Built" drawings.

Note: The following Sections IV.B. Through VI.D. are deleted as these requirements are included in other more pertinent, Permit sections or Attachments.

B. Inspection of Treatment Mixing Basins, Process Equipment and Storage Areas

The Treatment Mixing Basins, Process Equipment and Storage areas shall be inspected in accordance with Permit Part I.D.

Adjacent to each pair of treatment mixing basins (i.e. A-1, A-2 and A-3, A-4), and at the end of Basins B, C, and D are air intake plenums. Air and fugitive dust resulting from reagent feed, mixing and outloading are drawn into those plenums and conveyed to the air emissions control systems.

Access to the Basin D compartments is predominately through doors on the west side of the Treatment Building. Basin D2 is also used to receive shredded material from the drum shredder located between the Container Management Area and the Treatment Building. Reagent feed to the D basins is from a storage silo or through the use of mobil equipment.

Waste which has passed the pre-acceptance process (see Waste Analysis Plan) and is to be treated is scheduled for delivery to the Treatment Building . The waste delivery trucks will be directed to one of the Treatment Building doors for unloading. These doors are to be normally closed and are opened only to allow entry of a delivery of waste via truck and in the case of emergencies. Once a load of waste has been delivered to the Treatment Building by truck for transfer of waste into a basin, the door can be closed, thereby enclosing the transfer process. Based on a predetermined recipe, reagents are then metered in the treatment mixing basin. The backhoe, which is positioned adjacent to the treatment mixing basin, then begins to mix and incorporate the reagents into the waste. As the waste is being mixed, additional reagents can be added.

After mixing is complete, sampled and analyzed per the Waste Analysis Plan for transfer evaluation, the waste reagent mixture is allowed to set in the treatment mixing basin to cure, or it can be outloaded to a bulk or form box container. If the time required for curing is short, the waste can be loaded for direct transfer to the disposal cell after treatment verification. Waste requiring longer cure times can be loaded into bulk containers (such as rolloff boxes or form boxes) and transferred to holding areas within the Treatment Building for curing and verification testing of treatment. Waste(s) placed in the holding area is solid or semi-solid and in containers which are positioned with sufficient aisle spacing to allow inspections of the containers. After the treated waste has cured and been evaluated per the Waste Analysis Plan, it is then transferred to the secure disposal cells.

how determined based on WAP?

Adjacent to each pair of treatment mixing basins (i.e. A-1, A-2 and A-3, A-4), and at the end of Basins B, C, and D are air intake plenums. Air and fugitive dust resulting from reagent feed, mixing and outloading are drawn into those plenums and conveyed to the air emissions control systems.

Access to the Basin D compartments is predominately through doors on the west side of the Treatment Building. Basin D2 is also used to receive shredded material from the drum shredder located between the Container Management Area and the Treatment Building. Reagent feed to the D basins is from a storage silo or through the use of mobil equipment.

Waste which has passed the pre-acceptance process (see Waste Analysis Plan) and is to be treated is scheduled for delivery to the Treatment Building . The waste delivery trucks will be directed to one of the Treatment Building doors for unloading. These doors are to be normally closed and are opened only to allow entry of a delivery of waste via truck and in the case of emergencies. Once a load of waste has been delivered to the Treatment Building by truck for transfer of waste into a basin, the door can be closed, thereby enclosing the transfer process. Based on a predetermined recipe, reagents are then metered in the treatment mixing basin. The backhoe, which is positioned adjacent to the treatment mixing basin, then begins to mix and incorporate the reagents into the waste. As the waste is being mixed, additional reagents can be added.

After mixing is complete, sampled and analyzed per the Waste Analysis Plan for transfer evaluation, the waste reagent mixture is allowed to set in the treatment mixing basin to cure, or it can be outloaded to a bulk or form box container. If the time required for curing is short, the waste can be loaded for direct transfer to the disposal cell after treatment verification. Waste requiring longer cure times can be loaded into bulk containers (such as rolloff boxes or form boxes) and transferred to holding areas within the Treatment Building for curing and verification testing of treatment. Waste(s) placed in the holding area is solid or semi-solid and in containers which are positioned with sufficient aisle spacing to allow inspections of the containers. After the treated waste has cured and been evaluated per the Waste Analysis Plan, it is then transferred to the secure disposal cells.

how determined based on WAP?

B. Mechanical Waste Processing

Treatment Mixing Basins B and C containments accommodate a semi-continuous mechanical process system.

The mechanical waste processing equipment will generally be utilized for processing waste materials which require particle sizing prior to treatment. After particle sizing the waste will either be conveyed to the mechanical mixing system or to the backhoe mixing basins. The mechanical mixing system will generally be utilized for waste materials requiring complex treatment. Notwithstanding the mechanical waste processing equipment may be utilized to process and treat any waste materials which have been determined to be acceptable in accordance with the waste acceptance evaluations specified in the Waste Analysis Plan.

Waste will typically be transferred by handling equipment from the sub-basins (A-1 and A-2) in Treatment Mixing Basin A to the shredder hopper which accumulates 6 to 8 cubic yards. Containerized waste may be conveyed to the shredder from either the basins or floor staging area adjacent to the shredder. The shear shredder at the bottom of the hopper provides an initial size reduction of typically 1" x 6" particles. At the outlet of the shredder, the waste is screened through a dual level vibratory screen. Sludgy and sticky wastes can require thickening in Treatment Mixing Basins A-1 or A-2 prior to being shredded or sized to avoid blinding the screens. The smaller, undersized material is transferred to a belt conveyor and transferred to blending equipment. The oversized particles from the screen may be fed into a hammer mill for reduction to particle size of typically 3/8" particles. This material is returned to the belt conveyor with the undersized waste. Through a series of conveyors, the waste is delivered to the waste feed hopper for accumulation prior to conveying into mechanical mixers or into trucks for delivery to the backhoe mixing basins. Waste which does not require sizing, may also be transferred from A3 or A4 into a conveyor accumulation hopper.

In the two-stage mixers, liquid reagents and water are added to the waste to begin the chemical stabilization of the contaminants. The sludgy waste mixture is discharged to another blender/mixer for incorporation of dry cementitious reagents. From the blender/mixer, treated waste is discharged into form boxes atop a roller conveyor. The form boxes are lined with plastic.

The form boxes are moved via forklift to holding areas within the building for curing and waste treatment verification testing. When the treated waste has cured and verification testing is completed, the waste is transferred to the Secure Disposal Cell. The form boxes are designed to hold the treated waste during cure time. The freshly treated waste can appear wet due to the recipe for treatment, but leakage from the form boxes is not anticipated. Inspections of the holding area address potential leaks from the form boxes. Issues identified by inspection will be resolved by isolation of the form boxes, containment of the leaked liquid, repair or replacement of the form box, and (if required), further waste mixing. Prior to waste transfer to the Secure Disposal Cell, the liquid free criteria for waste is verified.

Through doors numbered 4 and 10, a corridor is provided to allow loading of cured form boxes onto transportation vehicles for transport to the Secure Disposal Cell. Unloading of stabilized material from the form boxes within the Secure Cell is accomplished by a front-end loader with tongs.

V. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE

A. The Waste Analysis Plan has procedures to ensure that when ignitable or reactive wastes are processed in the Treatment Building, that:

1. After treatment the resulting waste mixture, or dissolution of material will no longer meet the definition of ignitable or reactive waste under Section 261.21 or 261.23 of the Colorado Hazardous Waste Regulations; and

2. Precautions will be taken to prevent reactions which:

   - Generate extreme heat or pressure, fire or explosions, or violent reactions.

   - Produce uncontrolled toxic mists, fumes, dust, or gases in sufficient quantities to threaten human health or the environment;

- Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

- Through other like means threaten human health or the environment.

B. Operational Considerations

The Waste Analysis Plan requires that the waste pre-acceptance review and on-site acceptance process identify materials which are reactive, potentially reactive or ignitable. When these materials are identified, the Waste Analysis Plan requires that the appropriate health and safety precautions and handling procedures be specified on the Pre-acceptance Disposal Requirements (PDR) form and the Movement Request.

Reactive materials received at the facility are generally only potentially reactive, i.e. they only release potentially hazardous levels of cyanide, sulfide or ammonia gas at extreme pH ranges of 2 or 12. As these materials are rarely received near these extreme pH ranges, their potential for being reactive only occurs during actual treatment. The emphasis on special handling of these materials is during treatment. If materials are received in a state at which any levels of cyanide, sulfide or ammonia gas are being released these materials shall be treated immediately upon receipt so as to render them nonreactive.

At a minimum the following special handling procedures for reactive materials shall be included on the Movement Request.

- Treatment of the material will be under the direct supervision of either the Production Manager, Health and Safety Administrator or shift Foreman.

- Specific Personnel Protective Equipment shall be specified by the Health and Safety Manager.

- Specific monitoring for the release of potentially hazardous gases will be prescribed by the Health and Safety Manager.

- Monitoring of pH will be conducted during treatment.

Materials which are ignitable below 100° F are not acceptable for treatment. For materials which are ignitable between 100°F and 140°F special handling precautions shall be noted on the Movement Request. As a minimum, these precautions shall include the following:

- No smoking signs shall be posted in the Treatment Building.
- Only 12,000 gallons or 60 cubic yards of ignitable materials will be processed in a mixing basin at one time.
- Prior to unloading, the drum or truck will be grounded to prevent build-up of static electricity.
- All vehicles will be unloaded by gravity.
- When possible the waste material will be unloaded to the bottom of the mixing basin.
- If co-mingled, the co-mingled will be tested to see if the resulting mixture still exhibits characteristics of ignitability between 100°F and 140°F.
- If the treated material continues to exhibit ignitability then the above precaution as applicable will be followed in loading the material for transport to the landfill.

VI. SPECIAL REQUIREMENTS FOR IGNITABLE WASTE

The identification and segregation procedures for the incompatible waste materials are discussed in the Waste Analysis Plan. In summary, the preacceptance waste profile and evaluation, and quality control procedures for incoming materials will identify possible incompatible waste materials. Compatibility test procedures include; 1) gas evolution with pH change; 2) compatibility with treatment reagent; and 3) compatibility with treatment mixing basin contents or with treatment process equipment contents. Eight separate treatment mixing basins are provided to segregate any incompatible waste which require treatment. The Movement Request will be utilized to indicate the proper treatment mixing basin for unloading each waste receipt and to track the waste once treatment has been completed and analytical evaluation approves the on-site transfer of the waste.

Highway 36 Land Development Company
Deer Trail, CO

Container Management Building

Permit Attachment CMB

Permit Attachment CMB
Container Management Building

I. OPERATIONAL PROCEDURES

Trucks delivering containers to the Container Management Building (CMB) will be sent to one of the CMB loading docks via a Movement Request (MR). The MR is prepared by Analytical Services following review of paperwork conducted at the sampling station. The MR will contain pertinent information from the Waste Characterization Data Sheet (WCD) and Pre-treatment and Disposal Recommendation (PDR) that is applicable to safety and health procedures, handling requirements, and waste compatibility.

Waste management of containerized waste cannot be initiated without the MR. This includes offloading, storage and process/treatment of the containerized waste. Instructions on the MR will be followed explicitly. If instructions cannot be followed or are unclear, processing will stop and a supervisor will be notified.

At the loading dock the truck's rear wheels will be chocked. The receiving technician will receive and review the Movement Request and related paperwork from the truck driver. Containers will then be removed from the truck by either forklift or drum dolly and placed in the receiving area.

In the receiving area, all container labels will be inspected and verified. Each container will be opened for visual inspection. The 10% sampling as required by the Waste Acceptance Plan ~~will also be conducted at this time~~. Additionally, each container will be marked with a color coded stripe to further identify PH compatibility, and compatibility group designation found in 6 CCR 1007-3, Part 264, Appendix 5.

Containers not scheduled for processing in that operating day will be relocated to segregated storage areas according to compatibility. The compatibility group designation found in 6 CCR 1007-3, Part 264, Appendix V will be utilized for segregation. Movement will be by forklift or drum dolly. Containers may be stored in two-high stacks with stacked containers on pallets. Labels and stripping will be visible and aisle space as defined in Part II.A. will be maintained. The location of stored containers will be recorded in the Drum Log Book.

Containers scheduled for processing, either from receiving or from storage, will be handled in one of two primary methods. Full containers to be shredded will either be transported to the shredder feed within the CMB or the Shredder Staging Area in the Treatment Building. In other cases containers will be transported to the Treatment Building and emptied into one of the treatment basins, after which the empty container will be shredded separately. The management of the containers will be administered and tracked with a Movement Request.

Operations Foreman or designated Operators will confirm all activities on the Movement Request and that confirmation will be recorded in the computerized waste tracking system.

II. SAFETY PRECAUTIONS

A. All employees assigned to the CMB will have received the full compliment of required Highway 36 training as specified in the Personnel Training (PT) Plan.

B. The designated Operations Foreman and/or Lead Operator assigned to the CMB will have received additional on-the-job training covering the specifics of drum and container management requirements.

C. The waste acceptance process, site acceptance process for shipment receipts, and the waste tracking functions including the Health and Safety Department review of Movement Request special instructions will be reviewed in accordance with the Waste Analysis Plan by facility management to ensure completeness and accuracy regarding safety precautions, compatibility, and handling instructions.

D. The CMB will be inspected daily in accordance with the Inspection Plan.

E. Handling of drums and containers will be segregated by compatibility.

III. DRUM AND CONTAINER HANDLING PROCEDURES

A. Drums, T-Sacks and other containers scheduled for shredding are positioned in the shredding staging area in either the CMB or the Treatment Building based upon instructions provided by a Movement Request.

In the CMB, containers are fed to the shredder by a minimum of two people. Metal drums are placed into the shredded feed via a forklift equipped with a one- or two-drum grappler. Polyethylene drums are moved via a drum sling. T-Sacks and palletized containers are moved by conventional forklift.

During feed operations, one operator operates the fork-lift or drum sling, while the other is positioned at the shredder controls with direct observation of the shredder feed and the viewing access to the shredder discharge without leaving that work station.

In the Treatment Building area, drums and containers are fed to the shredder feed hopper via trackhoe or conveyer. When using a trackhoe, a minimum of two operators are utilized. One operates the trackhoe while the second places containers in the trackhoe bucket.

When utilizing a conveyor, only one operator is required to operate the forklift. However, if no other activities requiring personnel are currently underway within the Treatment Building, a minimum of one additional operator will be assigned to accompany that forklift operator.

B. Drummed solvent wastes scheduled to be managed in the Solvent Storage Tank System are positioned at the Solvent Transfer Station based upon instructions provided by a Movement Request.

As each drum is positioned in the Solvent Transfer Station it is grounded. Drum contents are then pumped to one of four solvent storage tanks based upon compatibility.

The RCRA "empty" drum is then staged for shredding prior to landfill disposal.

Highway 36 Land Development Company
Deer Trail, CO

Container Storage Areas

Permit Attachment CSA

Permit Attachment CSA
Container Storage Areas

I. OPERATIONAL PROCEDURES

The two Container Storage Areas (CSAs) will be used for storage of containers of non-liquid wastes which are undergoing treatment to meet Part 268 land disposal restrictions. The treated material will be stored in the CSAs for the waste to cure and/or while analytical testing is performed to verify treatment standards. Verification that the container does not contain liquids will be made in accordance with the Waste Analysis Plan (WAP) prior to containers being moved into the CSAs. Containers will be delivered to one of the CSA areas from the treatment building.

Containers will be moved from the CSAs to one of the following destinations:

- Treatment Building for continued treatment or
- On-site Secure Disposal Cell
- Shipment Off-site

Movement to either the Treatment Building or on-site Secure Disposal Cell will be authorized via a Movement Request (MR). Movements off-site will be via a properly completed manifest.

Delivery of the containers to the CSAs will be via an MR. The MR will be prepared by Analytical Services in accordance with the Waste Analysis Plan (WAP). The MR will contain pertinent information from the Waste Characterization Data Sheet (WCD) and Pre-treatment and Disposal Recommendation (PDR) that is applicable to safety and health procedures, handling requirements, and waste compatibility.

Storage of containerized waste within the CSAs cannot be initiated without the MR. Containers will be placed in the CSAs in accordance with the instructions provided by the MR. Instructions on the MR will be followed explicitly. If instructions cannot be followed or are unclear, movement of the container will not proceed and a supervisor will be notified.

At the CSAs, the receiving technician will receive and review the MR and related paperwork from the truck driver. Containers will then be moved from the transport vehicle and placed in the designated CSA. Management of containers into the CSAs will be recorded in the CSA Management Records and the Facility Operating Record. The CSA Management Records will be maintained as part of the Operating Record.

Except for inspection or sampling, all containers stored within the CSAs shall be tarped and/or kept closed at all times. No movement of waste materials between containers shall occur within the CSAs.

Containers stored within the CSAs shall be in good condition. The containers shall not be leaking, or have structural defects, such as rust, that compromise the containment capabilities of the containers. The container shall be compatible with the waste stored within the container.

The Operations Foreman or designated Operators will confirm all movement of containers into, within, or out of the CSAs on the MR and that confirmation will be recorded in the computerized waste tracking system.

The CSAs will be delineated through curbing, barriers and/or other means to prevent un-authorized entry.

II. RUN-OFF CONTROL AND SPILL CONTAINMENT

The CSAs will only be used to store containers holding non-liquid waste. As indicated on the attached drawing, Drawing Number 101, the CSAs are sloped to drain and remove precipitation in accordance with 6 CCR 1007-3, Part 264,175(c). The containers stored in the CSAs will be elevated or otherwise protected from coming into contact with any accumulated liquid.

In the unlikely event of a spill, the non-liquid nature of the waste will serve to preclude migration of spilled material away from the container. A containment system is not required to contain the waste. The spilled material shall be removed within the same work shift as the inspection in which the spill condition is found. Provided that the container is not damaged, the spill material may be placed back into the container from which it came. Otherwise, the spilled materials will be handled in accordance with established on-site transfer procedures.

As a precautionary measure, a retention curb with a manually operated drain will be provided on the downslope side of the CSAs. The curbs and drains will be constructed according Drawings 103 through 105, attached. The retention curb will be used to capture run-off in the event that precipitation occurs concurrently with a spill of waste material within the CSAs. During normal operations the drain will be open and allow precipitation run-off from the CSAs to be collected in the Facility's Potentially Contaminated Retention Basin (PCRB) as part of the normal stormwater management system.

In the event that a spill is detected within the CSAs, the retention curb drain shall be immediately closed. The drain shall remain closed until the spill has been cleaned up. If precipitation occurs prior to the spill being cleaned up then the captured precipitation shall be transferred to the Contaminated Water Storage Tanks. The transfer shall be in accordance with procedures specified in the WAP.

III. SAFETY PRECAUTIONS

A. All employees assigned to the CSAs will have received the full compliment of required Highway 36 training as specified in the Personnel Training (PT) Plan.

B. The designated Operations Foreman and/or Lead Operator assigned to the CSAs will have received additional on-the-job training covering the specifics of container management requirements.

C. The waste acceptance process, site acceptance process for shipment receipts, and the waste tracking functions including the Health and Safety Department review of Movement Request special instructions will be reviewed in accordance with the Waste Analysis Plan by facility management to ensure completeness and accuracy regarding safety precautions, compatibility, and handling instructions.

D. The CSAs will be inspected in accordance with the Inspection Plan and Part I.D.

E. Containers stored within the CSAs will be segregated by compatibility. Segregation will be provided by maintaining a minimum of 8 feet spacing between containers of incompatible materials. Compatibility group designation found in 6 CCR 1007-3, Part 264, Appendix v will be utilized for segregation. Labels will be visible for inspection purposes.