

FACILITY OPERATING PLAN

CONSTRUCTION AND DEMOLITION
AND INDUSTRIAL LANDFILL

Fort Riley, KS
Permit number: 787
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1.0 INTRODUCTION

Fort Riley, Kansas, owns and operates a construction/demolition (CD) landfill at the Old Campbell Hill Quarry located in the SW ¼ of Section 2, Township 11S, Range 6E. CD waste is only accepted from on Post. The location of this site is approximately 1 1/2 miles north of Camp Funston on Campbell Hill Road. The site is approximately 79.8 acres with 45 acres permitted for the disposal of CD waste, and separate areas for the disposal of asbestos waste and treated wood (See Attachment 1).

2.0 OVERVIEW

The purpose of the CD landfill is for the disposal of construction and demolition wastes generated on Fort Riley.

3.0 OPERATIONS

The facility is managed by the Fort Riley Directorate of Public Works Division (DPW). Operations at the site are conducted by an Operations Contractor (herein referred to as “the operator”). The following conditions describe the operations at the landfill.

3.1 Hours of Operation

The Fort Riley CD Landfill is open year round, Monday-Friday from 0730-1600. The CD Landfill is closed on all federal holidays.

3.2 Access Control

Access shall only be permitted to the CD landfill while an operator is on site. CD waste is accepted during normal posted hours and/or during specially arranged times to accommodate facility needs following times of natural disaster or other special circumstances.

The property is fenced and access is restricted by the use of locked gates. Fort Riley DPW or the operator shall keep access-control gates locked at all times when an operator is not present on site. All unauthorized vehicles and pedestrians shall be prohibited.

3.3 Origin and Composition of Waste

Approved users include the following: any Government activity operating government owned or military vehicles, any Government Contractor, or any other activity or agency designated by the Contracting Officer. Government Contractors may deposit only approved materials generated on Fort Riley.

3.4 Daily volume

The daily volume at the CD Landfill can fluctuate a good amount depending on weather, time of year, and construction project load. In 2017, the landfill has received an average of around 70 tons per day.

3.5 Documentation of Accepted Waste

All vehicles entering the landfill shall be recorded on the Construction and Demolition Disposal Record or the Asbestos Disposal Record. The Construction and Demolition Disposal Record shall list the date, time, vehicle number or license plate number, unit designation or contract name and number, and description of material.

3.6 Tonnage reporting

A quarterly tonnage report will be sent to the KDHE BWM within 30 days of the end of the quarter

3.7 Waste screening

Operator personnel shall be on site during hours of operation and inspect every load before it is deposited into the CD cell, storage areas for scrap metal or rejection. Inspection may be performed either at the scale house or in a provided area in the CD cell. Signing, posted at the access gate, is to inform customers what is and is not accepted, as per KSA 65-3402 and that all waste will be screened. A record of refused and returned waste will be retained for a minimum of 5 years.

In the event a load or items are rejected the screener shall document the date, time, driver's name, license plate number, hauling company name and address if applicable, size of load, reason rejected and inspectors name (KAR 28-29-308(f)(3)). A record of all waste screening will be kept and retained for minimum of 5 years.

3.8 Acceptable Waste

The following types of solid waste will be accepted: wastes from construction and demolition activities, wood crating materials, inert wood ammunition boxes, wood based furniture, asphalt, pavement, concrete, street sweepings, diseased trees and other wastes as may be designated by the Fort Riley Contracting Officer's Representative (COR).

Non-friable and friable asbestos waste from demolition projects on Fort Riley will be accepted, but must be deposited in the asbestos waste cell by appointment. See paragraph 3.13 for more information on how asbestos waste is screened and managed at the asbestos cell.

Treated wood from demolition projects is accepted but must be disposed of in the Treated Wood cell. See paragraph 3.14 for more information on how treated wood is managed.

3.9 Unacceptable waste

The following wastes will not be accepted: hazardous waste, controlled waste, ammunition, regulated medical waste, regulated PCB waste, or dead animals will not be accepted at the CD Landfill. If any of these wastes are discovered in the refuse containers or dumped at the landfill, it will be protected from damage. The COR will be notified within two hours of discovery. If hazardous or controlled waste is spilled or found leaking, immediate action must be taken to protect the safety and health of personnel and the environment. In the event of a hazardous or

controlled waste spill, the Operator shall promptly contact the Fort Riley Fire Department and then the COR.

KDHE must be notified within one business day if a regulated hazardous waste, regulated PCB waste, or medical waste is brought to the facility. This requirement applies to waste that has been accepted and waste that is rejected. Notification shall include the type, amount, and source of waste.

3.10 Storing and removing non-C&D waste

Non-CD Material	Method and Length of Storage	Final Disposal Site
<p>Scrap Metal, Wooden Pallets, and Recyclable Materials including:</p> <p>Metal items such as; fencing components, concertina wire, siding, flashings, roofing, fasciae, soffits, gutters, downspouts, metal doors, door frames, builders hardware, windows, metal toilet and bath accessories, metal toilet partitions, metal pipe, pipe fittings and valves (insulation must be removed prior), and metal plumbing fixtures.</p>	<p>Small amounts of scrap metal or other recyclable items that arrive with other acceptable debris will be diverted and placed in the salvage area. No more than 20 pounds of divertible material will be accumulated at any one time. The Operator will notify personnel from the Fort Riley Recycle Program at 239-8686/2385 when 20 pounds is accumulated. The Recycle Program personnel will then make arrangements to pick up the material.</p>	<p>Fort Riley Recycle Center</p>
<p>Furniture</p>	<p>Furniture will not be allowed in the CD Landfill. If furniture is discovered, it will be placed in the salvage area near the attendant's building until it can be transferred to the Defense Logistics Agency (DLA) Disposition Services.</p>	<p>DLA Disposition Services</p>
<p>Tree Debris</p>	<p>Tree debris is not allowed in the CD landfill. Anyone bringing tree material to the Landfill will be directed to the Fort Riley Tree Disposal Area</p>	<p>Fort Riley Tree Disposal Area</p>

3.11 Salvaging operations

The Operator shall also designate a site for salvable items near the attendant's building and the disposal records shall indicate those customers whom deposit salvable items. The Operator shall also designate areas for reusable materials such as topsoil, fill material, concrete and masonry rubble and asphalt. These materials may be re-used at other locations or as cover or buried as debris.

Small amounts of scrap metal or other recyclable items that arrive with other acceptable debris will be diverted and placed in the salvage area. No more than 20 pounds of divertible material will be accumulated at any one time. The Operator will notify personnel from the Fort Riley Recycle Program at 239-8686/2385 when 20 pounds is accumulated. The Recycle Program personnel will then make arrangements to pick up the material. The remark column of the CD disposal record will be used to indicate which customers have delivered salvable items. The purpose of this set aside area is to prevent disposal of incidental amounts of scrap metal (steel, aluminum, brass, copper and cast iron) in the landfill.

There shall be no salvaging or scavenging of any item(s) from the landfill except for items of military importance. The Operator shall only permit this search to take place when approved by the COR.

3.12 Appliances

Appliances are not accepted at the Fort Riley CD Landfill. Anyone trying to dispose of appliances will be directed to Fort Riley's Environmental Waste Management Center (EWMC).

3.13 Asbestos

Waste asbestos generated by demolition and renovation operations will be disposed of by burial in the area set aside specifically for this purpose. Asbestos waste shall only be accepted if properly packaged and handled according to Kansas Administrative Regulation 28-50. Asbestos waste shall be accepted by appointment only, 24 hours in advance. Asbestos waste shall be placed in the specified area and immediately covered with one foot of a low permeability soil and compacted as necessary to prevent contact water and erosion due to runoff. Asbestos shall be handled to preclude visible emissions to outside air. Each asbestos delivery shall be recorded on the Asbestos Disposal Record. The recorded data shall include date, time, license or vehicle number, source (facility number), action agency (contract number or Department of Public Works), name and signature of person making delivery, telephone number, estimated volume, and disposal location. The loaded vehicle shall be weighed upon entering the landfill and this weight recorded in the loaded weight column. Before leaving the landfill, the vehicle shall be weighed and this weight recorded in the empty weight column. The difference between the loaded weight and empty weight shall be recorded in the waste weight column.

Storm water drainage of the asbestos area shall be maintained at all times. The Operator shall maintain a drainage ditch running along the southwest edge of the landfill crossing under the lower entrance road. Placement of debris near the southwest corner of the asbestos area shall be in such a manner as to maintain the drainage ditch.

3.14 Treated Wood

Waste treated wood generated by demolition and renovation operations will be disposed of by burial in the area set aside specifically for this purpose. The Treated Wood Cell must be covered every 60 days or as described in paragraph 3.17.2; The Operator will notify the COR immediately upon noticing that this cell is filled to seventy five percent of their operating capacity.

3.15 Concertina Wire

At one time, Fort Riley operated a Concertina Wire disposal cell adjacent to the Asbestos Cell. Users were required to sandwich rolls of wire between wooden pallets and banded together. This area received cover material every 60 days. However, Fort Riley now recycles concertina wire and no wire has been placed in the cell within the last 5 years and the installation does not anticipate using it while recycling is possible.

3.16 Waste placement and compaction

Waste is placed as near to the toe of the waste slope as possible to permit adequate room for additional screening, if necessary. The working face should be between 20 and 30 degrees horizontally from the cell floor. The material is then worked up the slope in not more than two feet lift increments. At a minimum, the waste is placed on the face of the slope by the end of the working day.

Due to the material characteristics being placed, the operator must always use judgment in properly working the materials up the face of the slope. This is to ensure stability of the slope and minimize differential settlement in the future.

Compaction is required daily when waste has been accepted. The daily compaction is achieved by driving the equivalent of a D8 Cat with compaction shoes up and down the slope while working the entire face back and forth. The recommended number of passes ranges from between two to five, with two being the minimum. Some materials may require more than five passes. Larger equipment will require fewer passes due to the larger compaction effort induced. However, the operator must always use judgment in properly working the materials up the face of the slope so the maximum practical density of the material is achieved. This is to reduce bridging, ensure slope stability and thereby minimize differential settlement in the future while maximizing available cell volume.

3.17 Landfill Cover

3.17.1 Intermediate Cover

Intermediate cover material shall be applied to the compacted waste based on the following conditions; every 2,000 tons of waste disposed or every 120 days, whichever occurs first. The intermediate cover shall have a minimum compacted thickness of one foot. This minimum cover

depth will help limit air intrusion to control risk of fire, litter and limit vector harborage. For further clarifications, refer to the CD landfill construction plans.

Cover will be applied procedurally by those means deemed most suitable. Material may be placed directly over the waste material by a scraper and then graded by the dozer, or deposited at the toe of the slope and placed entirely by the dozer. Again, the operator shall use their best judgment for equipment selection and procedures. The operator shall accomplish periodic grading and compaction to repair erosion damage, cracks, and fill depressions.

3.17.2 Bi-Monthly Cover

The Operator will apply cover to the Treated wood cell and the Concertina wire cell every 60 days or more often if deemed necessary; depending on the amount of waste deposits received. Currently, the Concertina Wire cell is not being used since the wire is now being recycled and therefore the wire that has been disposed of in the cell remains covered.

Cover is to be applied to a compacted depth of at least one foot. The Operator shall accomplish periodic grading and compaction to repair erosion damage, cracks, and fill depressions. Cover material may be obtained from the upper area of the landfill above the rock face, from off-site areas or from wastes being deposited. In all cases, the Operator is responsible for obtaining the cover material. However, all cover material must be approved by the COR.

3.18 Odor, dust, and litter

Contact water may be utilized for dust suppression. Suggested procedures for use on Fort Riley roads are water sprayed from a distributor truck to settle the dust and if a more permanent solution is required, then recycled asphalt pavement will be spread on the road at 3-4 inches deep.

The Operator shall be responsible for all litter control. The area covered includes all areas inside and outside of the landfill that are affected by any litter that comes from the landfill. The area includes all areas within the landfill itself; fences; roadways, including the portion of the entrance road from Campbell Hill Road to the landfill and the entrance gate and 50 feet on either side of the road; buildings; and wind-blown material on surrounding areas. Litter includes debris that has fallen from vehicles. The Operator shall keep all litter picked up on a daily basis. If the activity responsible for dropping debris can be identified, those responsible will be directed to clean up the spillage and to prevent similar occurrences in the future.

3.19 Water control

3.19.1 Storm Water

All storm water control systems shall be maintained as specified and shown in the CD landfill construction plans. Refer to the construction plans for phasing and directing of storm water. Construction plans shall be kept and maintained in an acceptable location at both the landfill and Public Work's offices.

The storm water design for the CD landfill is such that all runoff water is diverted from operating cells by means of earth berms and channels, thus preventing contamination via contact with the CD debris. However, water which is in direct contact with the CD debris through precipitation is contained in the cells as indicated in the CD landfill construction plans. (See Attachment 1).

The Kansas Department of Health and Environment (KDHE) shall be contacted by the end of the next business day if the storm water control and management system should fail. However, if for any reason contact water is discharged from the 79.8 acre CD site, the department shall be notified immediately pursuant to KAR 28-48-2.

3.19.2 Contact Water

The cell design volume is such that all contact water from the 25 year, 24 hour storm can be stored in the cells for removal by evaporation and seepage. Water from the cells may be used for dust suppression or irrigation of the landfill grasses, but may not leave the landfill site.

3.20 Water supply system

There is no water supply system servicing the CD Landfill. The closest water service is Fort Riley's Municipal Water System.

3.21 Machinery and Equipment

All contractor equipment shall bear the contractor's logo on both sides of said equipment or it will not be permitted on the site without a signed exemption from the Contracting Officer. In addition, equipment Operator(s) shall be present as required to operate equipment and monitor unloading of waste materials. Permanent equipment required at the landfill includes the equivalent of a D8 dozer, or larger, and shall be equipped with compaction shoes and a loader. The loader shall perform placement of fill on asbestos waste. Other equipment that will be required on a periodic basis includes a grader, a compactor and dump trucks for the purpose of placing, compacting and grading cover and to maintain the access road.

4.0 SAFETY PROCEDURES AND EMPLOYEE TRAINING

All employees shall follow all Fort Riley Installation Safety policies when performing duties at the facility. In the event of an accident or emergency, the Fort Riley Directorate of Emergency Services must be notified.

5.0 CONTINGENCY PLANS

5.1 Fire

In the event of accidental fire, the Operator shall promptly contact the Fort Riley Fire Department. The Operator shall provide his on-site equipment with operators to assist the Fire Department under their direction in spreading out the burning debris so water can be applied. If a vehicle arrives carrying burning waste, the Operator shall not permit it near the working face of the landfill, routing it as quickly as possible to a safe area, away from buildings, where its load shall be dumped and the fire extinguished. The Operator is not required to provide any

firefighting equipment except for fire extinguishers as required in vehicles (KAR 28-29-23) and dozer to spread burning debris.

In case of fire, KDHE is to be notified within one day and a written report submitted within one week after firefighting activities have ended. The area affected shall be re-graded so proper cover and grades are achieved. If an area with final cover is affected, seeding for proper vegetative cover will also be required

5.2 Spills

In the event of a spill, the operator must follow the spill response and notification guidance listed in the Fort Riley Environmental Management Plan. If a spill occurs on Fort Riley, the DPW Spill Coordinator will notify KDHE as required.

The DPW Spill Coordinator maintains the Site Specific Spill Contingency Plan for the CD Landfill and updates it annually or as required

5.3 Equipment Breakdown

If the Campbell Hill Construction/Demolition Landfill has to suspend operations unexpectedly, due to equipment breakdown, Fort Riley will transport material to one of the several surrounding communities' construction/demolition landfills.

5.4 Personnel Emergency

In case of personnel emergency in which screening operations may not continue, waste acceptance will cease until the emergency is resolved. Once personnel are in place to begin screening, waste will be accepted.

5.5 Weather

The Operations Contractor shall prepare and submit an operation plan that provides detailed information on how they propose to operate the landfill during periods of inclement weather. During severe winter weather, frost can penetrate up to 3 feet. It is also normal to have several inches of rain in one day. Inclement weather may necessitate additional handling of waste in order to obtain required placement and compaction in accordance with the appropriate Phase map. To accomplish this, it may be necessary to deposit waste initially at a designated interim location at the top of the slope and to relocate the waste, or push it down the slope, when final placement and compaction can be obtained. However if this cannot be achieved without containing all contact water, waste placement shall cease until it can be placed in the properly constructed waste cell.

5.6 Suspension of Receipt of Waste

Waste will not be accepted in emergency situations as outlined above, when required by conditions of the permit or when the landfill reaches final elevation.

6.0 FACILITY DEVELOPMENT AND WASTE PLACEMENT PROGRESSION

The exterior slopes of the landfill utilize 4:1 slopes which will be seeded with a native grass seed.

The Fort Riley CD Landfill utilizes the continuous area operations scheme when placing waste at the CD Landfill. Soil and clean rubble brought to the landfill are segregated and stockpiled near the active face for use as cover material.

Drawings of the Phases are included in Attachment 1. Once a particular phase is approaching the final closure elevations, as shown in the construction plans, and will be closed, KDHE must be given written notification at least 60 days prior to the event. Waste acceptance will move to the next phase and a closed sign shall be placed at the old cell entrance. In the case that the last phase is approaching the final closure elevation, KDHE must be given written notification that the facility will be closing at least 60 days prior to the event. Signs shall be posted on the gate notifying haulers of the upcoming CD landfill closure date, directing them to an approved alternate site.

Clean Rubble and soil brought to the CD Landfill are stored near the active face and are used for intermediate and final cover as needed.

6.1 Facility Capacity

Phases 1 through 6 provide for a minimum of 277,000 cubic yards and a maximum of 345,000 cubic yards of CD fill per Phase. Phase 7 provides approximately 358,000 cubic yards of CD fill. Total approximate fill volumes are as follows:

CD - 2,320,000 cubic yards

Asbestos Cell - 214,000 cubic yards

Lime Sludge - 51,000 cubic yards

6.2 Expected Facility Life

The expected life of the facility is difficult to predict due to the variability in the annual amounts of debris disposed of in the landfill. Construction and Demolition rates are dependent on Federal Appropriations for construction projects and the number of troops stationed at Fort Riley. The amount of debris deposited in the landfill has varied greatly from year to year. For example in 2017, approximately 45,000 tons of debris was disposed of in the CD Landfill. That number is typical of an average construction year for Fort Riley. However, during periods with more construction, like 2005, the landfill could receive as much as 146,000 tons of debris.

Fort Riley currently estimates that it will take between 10-15 years before the CD landfill reaches capacity at current disposal rates. The Asbestos Cell has approximately 207,000 cubic yards of space remaining. At the current disposal rate, this cell will not reach capacity before the CD portion of the landfill. The capacity has been reached for the lime sludge Cell and it has not been used for disposal in recent years. KDHE recognized it as closed in 2017.

7.0 RECORDKEEPING

The Operator shall submit CD Disposal Records weekly, Asbestos Disposal Record monthly and Site Maps quarterly to the COR. Site Maps shall consist of a copy of the appropriate Phase Map with disposal locations (CD wastes and Asbestos wastes), applicable for that quarter noted thereon. All vehicles entering the landfill shall be recorded. The remark block shall be used to describe materials rejected and reason for rejection. The CD Disposal Record shall be turned into the COR not later than 10:00 a.m. the first working day of the following week. The Asbestos Disposal Record shall be turned into the COR not later than the fifth working day of the following month. The site map shall be turned into the COR not later than the fifth working day of the following quarter. Entries on the disposal record forms shall be made when disposal occurs. Presentable markup of the Site Map shall be updated weekly. The disposal record forms and site map shall be available for in-progress inspection by the COR during the reporting period.

Retention of long-term permits and plans shall be maintained by the DPW. All pertinent documents shall be stored for a minimum of five years after the completion of the post-closure period. Copies of these pertinent documents shall be maintained at the DPW office. The following documents for permits and construction shall be included:

1. Permit application and renewal documents.
2. Construction Quality Assurance (CQA) plans and reports.
3. Additional information as required by the conditions of the permit.

The following documents shall also be stored at the landfill facility:

1. Current permit.
2. Permit conditions.
3. Employee training
4. Construction plans.

8.0 ATTACHMENTS

8.1 Attachment 1 – Facility Aerial Map

Campbell Hill Construction, Demolition, and Industrial Landfill



Legend

- | | |
|---|--|
|  Asbestos Cell |  Stormwater Drain |
|  Lime Sludge (Closed) |  Scale and Scale House |
|  Treated Lumber |  Stormwater Control Berms (Location of these berms can change as landfill develops) |
|  Concertina Wire Cell # 1 (Inactive) |  Drainage Feature |
|  Concertina Wire Cell # 2 (Inactive) |  Landfill Boundary |

0.2 0.1 0 0.2 Miles



8.2 Attachment 2 – Phase Drawings











