

# FACILITY OPERATING PLAN

Industrial Landfill

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Facility name

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Permit number

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Date

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Address

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## Operating conditions

Months	Day(s) of the week	Hours
Non-operation days and holidays		
Access control		
Access roads		

A permanent sign shall be posted at the entrance of the facility with the following information:

- Only permitted industrial wastes are accepted
- Hazardous waste is prohibited
- Solid waste disposal area permit number
- Hours of operation
- Penalty for unauthorized trespassing and dumping
- Name and telephone number of the appropriate emergency response agencies, if different from the owner and operator
- Name, address, and telephone number of the company operating the facility

## Origin of waste & waste characteristics

Waste handling procedures

## Expected daily volume \_\_\_\_\_ tons

Documentation of accepted waste
Tonnage reporting

## Waste screening procedures

Unacceptable industrial/plant waste: -

Procedures for waste screening

## Storing and removing non-industrial waste

Method for removal of non-industrial waste at the facility

## Salvaging and scavenging

*Scavenging is not permitted*

Salvaged material	Method of storage, frequency of removal, and final destination

## Waste placement and compaction

Placement of waste at the working face
Compaction of waste

## Safety procedures

Employee training
Employee safety procedures

## Cover application

Cover Characteristics & Frequency
Approved alternate cover materials
Intermediate cover

## Contact water management

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## Odor, dust, and litter control

Disposal unit
Haul roads

## Storm water management

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## Utilities

Heat	
Power	
Water	
Communication	
Sanitary facilities	

## Machinery and equipment

Equipment	Design capacity



## Contingency plan

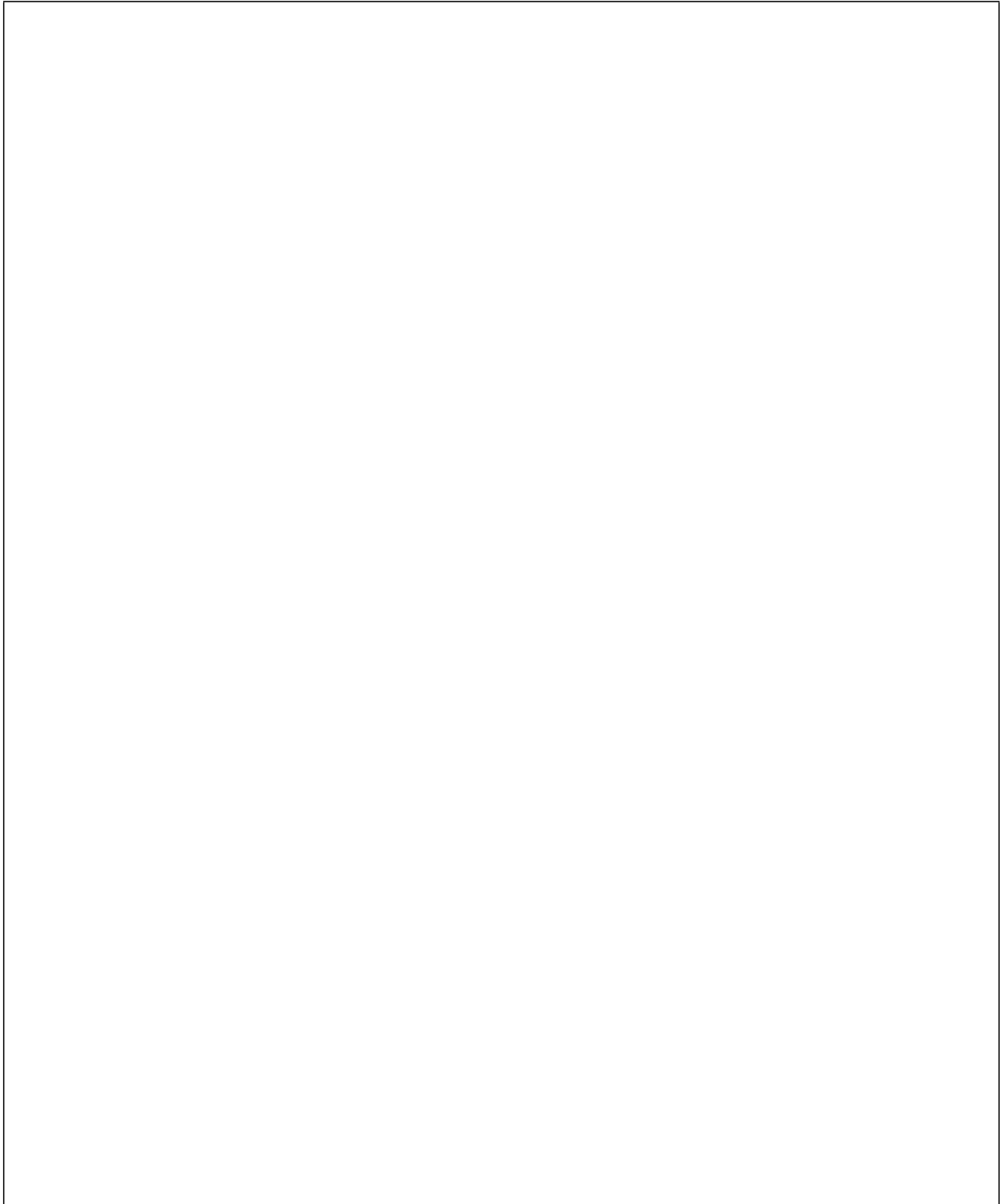
Emergency	Response (include timeframe to notify KDHE)
Fire	
Spills	
Equipment breakdown	
Personnel emergency	
High wind speeds	
Tornado	
Flooding	
Ice storms	

## Closure

Temporary	
Final	

## Facility development and waste placement progression

Notify your BWM Permit Manager 60 days before construction of disposal areas and final cover.

A large, empty rectangular box with a thin black border, occupying most of the page. It is intended for a diagram or drawing showing the facility development and waste placement progression.

Facility capacity \_\_\_\_\_ yd<sup>3</sup>

Expected facility life \_\_\_\_\_ years

### Recordkeeping

The following records will be retained for a minimum of five years

- Location restriction demonstrations
- For closed cells, closure and post-closure care plans and any monitoring testing or analytical data
- For closed cells, closure and post-closure care plans and any monitoring testing, or analytical data
- Cost estimates and financial assurance documentation
- A copy of the current facility permit, including all approved plans and specifications

Describe where the records will be kept

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### Attachments

Attachment 1: "Definitions and Illustrations for Facility Operations Plan (FOP) for an Industrial Landfill in Kansas" – 6/19/19; 7 Pages

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# Definitions and Illustrations for Facility Operations Plan (FOP) for an Industrial Landfill in Kansas

June 19, 2019

- 1.0 DEFINITIONS (also see the DEFINITIONS in the Kansas Statutes and Administrative Regulations)
  - 1.1 25-year, 24-hour storm event
    - 1.1.1 A 24-hour precipitation event that has a probable recurrence interval of once every 25 years (i.e., a 4% chance of occurring in any one year).
  - 1.2 Active Area (provide a plan and cross section drawings with labels) (see the Attached Drawings)
    - 1.2.1 The area in which solid waste disposal takes place and contact water is generated when precipitation contacts with solid waste. The active area is confined by run-on and run-off control berms. Maintain a large enough area for operations, but not too big (to minimize the generation of contact water).
    - 1.2.2 Typical Section
  - 1.3 Alternate Cover
    - 1.3.1 Material that the site has received KDHE approval to use as cover.
    - 1.3.2 Alternate cover must be shown to achieve these performance standards:
      - 1.3.2.1 Prevention of blowing debris
      - 1.3.2.2 Minimization of access to waste by vectors
      - 1.3.2.3 Minimization of odors
      - 1.3.2.4 Minimization of the threat of fire
      - 1.3.2.5 Shedding precipitation
  - 1.4 Authorization to dispose of Solid Waste into a newly constructed Waste Disposal Area
    - 1.4.1 This is a notification (email message) from the KDHE Permit Manager to the Permittee that authorizes the disposal of solid waste into a newly CQA'd Disposal Area.
  - 1.5 Buffer
    - 1.5.1 The right-angle distance from the property line or facility boundary to the edge of disposed solid waste.
  - 1.6 Closure and Post-Closure Plan (this is a permit document under a separate cover)
    - 1.6.1 Closure
      - 1.6.1.1 A narrative and detail drawing that explains and illustrates how the landfill facility will be closed.
    - 1.6.2 Post-Closure Plan
      - 1.6.2.1 A narrative that explains the activities that will be implemented during the Post-Closure period.
  - 1.7 Construction Quality Assurance (CQA) (see Bureau of Waste Management Policy 00-04 amended June 19, 2009). This is a permit document under a separate cover.
    - 1.7.1 A planned system of activities that provide the landfill owner and the KDHE assurance that the facility was constructed as specified in the design documents.
  - 1.8 CQA Permitted Area for Disposal (CQA'd Disposal Area)
    - 1.8.1 Area that has been approved for disposal by KDHE-BWM through the official CQA Process (approved CQA Plan and approved CQA Report)
  - 1.9 CQA Plan (see Bureau of Waste Management Policy 00-04 amended June 19, 2009).

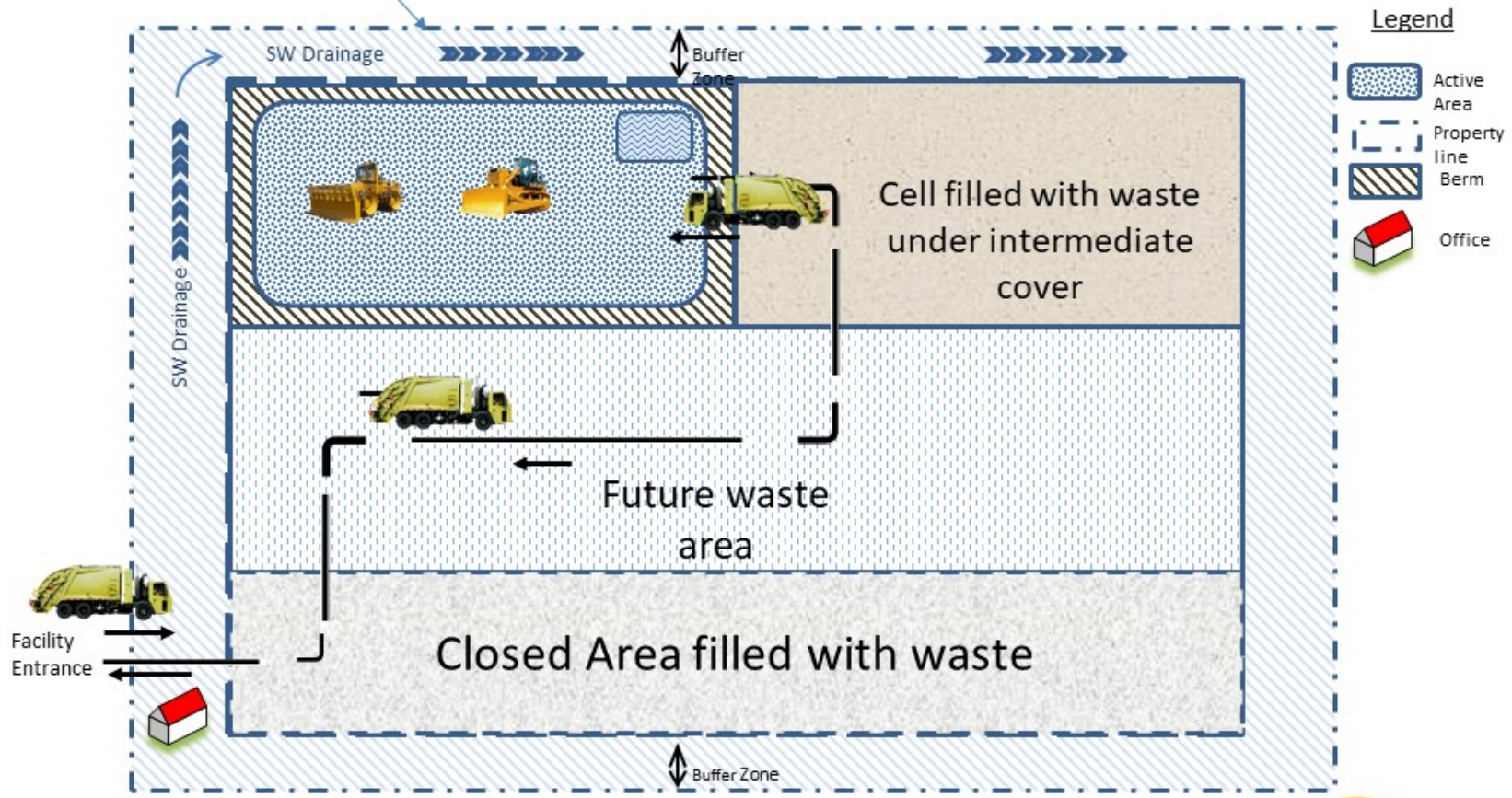
- 1.9.1 A project specific construction oversight plan prepared and sealed by a Kansas-P.E. The CQA Plan must include a detailed description of all CQA activities that will be used during construction to manage the installed quality of the facility.
- 1.10 CQA Report (see Bureau of Waste Management Policy 00-4 amended June 19, 2009).
  - 1.10.1 A construction project Report that is completed and sealed by the CQA Engineer (a Kansas P.E.) and submitted to KDHE-BWM for review and approval of the project. The CQA Report includes Record Engineering Drawings that illustrate what all was constructed and at what location and elevation during the project.
- 1.11 Contact Water
  - 1.11.1 Liquid that has infiltrated through the industrial waste or has been in contact with the industrial waste for any period of time. Shall include all runoff from the active area of the industrial landfill and all liquid derived from the industrial waste.
  - 1.11.2 Contact water is to be managed on site and shall not be allowed to run off the landfill property.
- 1.12 Cover Requirements
  - 1.12.1 Cover is a material, usually soil, placed over waste to minimize exposure to the elements and the generation of contact water, odors, or other undesirable aesthetics. The FOP for an industrial landfill shall specify the KDHE approved type and frequency of cover to be applied to the waste.
- 1.13 Design Drawings
  - 1.13.1 Drawings for a Kansas Solid Waste Landfill that are prepared and sealed by a Kansas licensed Professional Engineer, except for the Plat of Survey, that is sealed by a Kansas-licensed Professional Land Surveyor).
- 1.14 Elements of a Landfill Construction Project
  - 1.14.1 Construction Quality Assurance (CQA)
    - 1.14.1.1 Scope of Work
    - 1.14.1.2 Construction Cost Estimate (Budget)
    - 1.14.1.3 Construction Schedule
- 1.15 Erosion and Water Pollution Control Plan
  - 1.4.1 The Plan will help identify the erosion sources and potential locations of sediment discharge that could affect the quality of storm water and irrigation water discharges off the landfill facility. As part of the Plan, document the management practices you have or plan to implement based on the potential for sediment discharge and erosion. The plan development must adequately address your operations and must be implemented to address site specific conditions.
- 1.16 Expected daily volume
  - 1.16.1 The average amount of solid waste delivered for disposal (in cubic yards)
- 1.17 Facility Boundary Line
  - 1.17.1 A Landfill boundary line that is requested by the owner, established by a Kansas-licensed Professional Land Surveyor, and is agreed upon by KDHE-BWM. Facility Boundary Lines and or property lines are used to define the Facility Permitted Area of the landfill facility.
- 1.18 Facility Operations Plan (FOP)
  - 1.18.1 A permit document that describes the operations of a landfill facility. This is a permit document under a separate cover.
- 1.19 Facility Permitted Area (FPA)
  - 1.19.1 The area of land owned and operated by the Landfill Permittee, in acres, as surveyed on the ground by a Kansas-licensed Land Surveyor. The FPA is stated on the face of the most recent permit approved by KDHE.
- 1.20 Final Cover

- 1.20.1 An engineered cover with the purpose of minimizing the infiltration of water into the waste mass and protecting of the low-permeable layer from the freeze-thaw process.
- 1.20.2 Final covered areas of the landfill are not to be surcharged.
- 1.21 Financial Assurance (FA)
  - 1.21.1 Annual Permit Renewal
  - 1.21.2 Closure and Post Closure Cost Estimate Worksheets
  - 1.21.3 Estimated Life Worksheet
  - 1.21.4 Liability Insurance
  - 1.21.5 KDHE Financial Assurance Auditor
- 1.22 Industrial waste
  - 1.22.1 All solid waste resulting from manufacturing, commercial and industrial processes which is not suitable for discharge to a sanitary sewer or treatment in a community sewage treatment plant or is not beneficially used in a manner that meets the definition of recyclables. Industrial waste includes, but is not limited to: Mining wastes from extraction, beneficiation and processing of ores and minerals unless those minerals are returned to the mine site; fly ash, bottom ash, slag and flue gas emission wastes generated primarily from the combustion of coal or other fossil fuels; cement kiln dust; waste oil and sludges; waste oil filters; and fluorescent lamps. Solid waste resulting from construction, remodeling, repair and demolition of structures, roads, sidewalks and utilities; untreated wood and untreated sawdust from any source; treated wood from construction or demolition projects; small amounts of municipal solid waste generated by the consumption of food and drinks at construction or demolition sites; furniture and appliance from which ozone depleting CFCs have been removed; solid waste consisting of motor vehicle window glass; and solid waste consisting of vegetation from land clearing and grubbing, utility maintenance, and seasonal or storm-related cleanup.
- 1.23 Intermediate Cover
  - 1.23.1 A lift of a minimum of 12 inches thick of soil over solid waste.
  - 1.23.2 Intermediate covered areas may carry storm water.
  - 1.23.3 Intermediate covered areas may be surcharged. Discuss this with your KDHE-BWM Permit Manager.
- 1.24 Kansas Department of Health and Environment (KDHE)
  - 1.24.1 Bureau of Waste Management (BWM) website:
    - 1.24.1.1 [www.kdheks.gov/waste](http://www.kdheks.gov/waste)
      - 1.24.1.1.1 Kansas Statutes and Regulations
      - 1.24.1.1.2 BWM Technical Guidance Documents
      - 1.24.1.1.3 BWM Policies
- 1.25 Kansas-licensed Professional Engineer (Kansas P.E.)
  - 1.25.1 A person who has been licensed in the state of Kansas to practice Professional Engineering.
- 1.26 KDHE District Office
  - 1.26.1 KDHE District Inspectors
    - 1.26.1.1 District Solid Waste staff who inspect Kansas Solid Waste facilities.
- 1.27 KDHE Permit Manager
  - 1.26.1 Your point of contact for the Bureau of Waste Management. See the KDHE-BWM website ([www.kdheks.gov/waste](http://www.kdheks.gov/waste))
- 1.28 Landfill legal description
  - 1.28.1 A description of the legal boundary of the landfill, using metes and bounds or aliquot parts, that is prepared as part of the plat or certificate of survey, by a Kansas-licensed Professional Land Surveyor.

- 1.29 Lift
  - 1.29.1 An accumulation of waste that is compacted into a unit.
- 1.30 Lower Explosive Limit (LEL)
  - 1.30.1 Lowest percent volume of a mixture of explosive gases in air that will propagate a flame at 25°C and atmospheric pressure.
- 1.31 National Pollutant Discharge Elimination System (NPDES)
  - 1.31.1 The legal framework within which permits to discharge pollutants or combinations of pollutants into navigable waters of the United States are issued by the Environmental Protection Agency or by an approved state. NPDES permits would be required for the discharge of contact water to navigable waters and may be required for the discharge of stormwater during landfill construction and/or normal operations.
- 1.32 Permit Application Form (see KDHE-BWM website)
- 1.33 Permitted Disposal Area (DA)
  - 1.33.1 The permitted area of disposal as stated on the solid waste PERMIT. Such area or portions of such area(s) are not permitted for solid waste disposal until proper construction quality assurance (CQA) activities have been completed and officially approved by KDHE-BWM.
- 1.34 Property corners
  - 1.34.1 A point on a land boundary in which two or more boundary lines meet.
  - 1.34.2 Monument
    - 1.34.2.1 A physical structure which marks the location of a corner or other survey point.
- 1.35 Property line
  - 1.35.1 The division between two parcels of land.
- 1.36 Restrictive Covenant
  - 1.36.1 A document filed with the County Register of Deeds Office that requires subsequent property owners or tenants to consult with the department during planning of any improvement to the site and to receive approval from the department before commencing of various types of work, development, and improvements done on the property.
- 1.37 Run-Off Control Berm
  - 1.37.1 A berm that prevents the discharge of contact water from the active area of the landfill.
- 1.38 Run-On Control Berm
  - 1.38.1 A berm that separates the generation of contact water in the active area of the landfill from storm water channels.
- 1.39 Soil stockpile
  - 1.39.1 Stockpiled earthen material typically composed of clay, clean soil, structural fill, and vegetative soil.
- 1.40 Tonnage Reporting
  - 1.40.1 The amount of solid waste delivered to a landfill for disposal (in tons).
- 1.41 Vertical separation to groundwater
  - 1.41.1 The vertical distance from the lowest point of a disposal unit to the highest predicted groundwater elevation, based on historical data or site conditions in the uppermost aquifer underlying the disposal area.
- 1.42 Waste Screening
  - 1.42.1 A waste screening program designed to screen non-industrial waste, liquid waste, and hazardous waste from being disposed of in the industrial landfill.
- 1.43 Working Face
  - 1.43.1 Any part of a solid waste disposal area where waste is being disposed of.

Property Line

# Industrial Landfill Plan

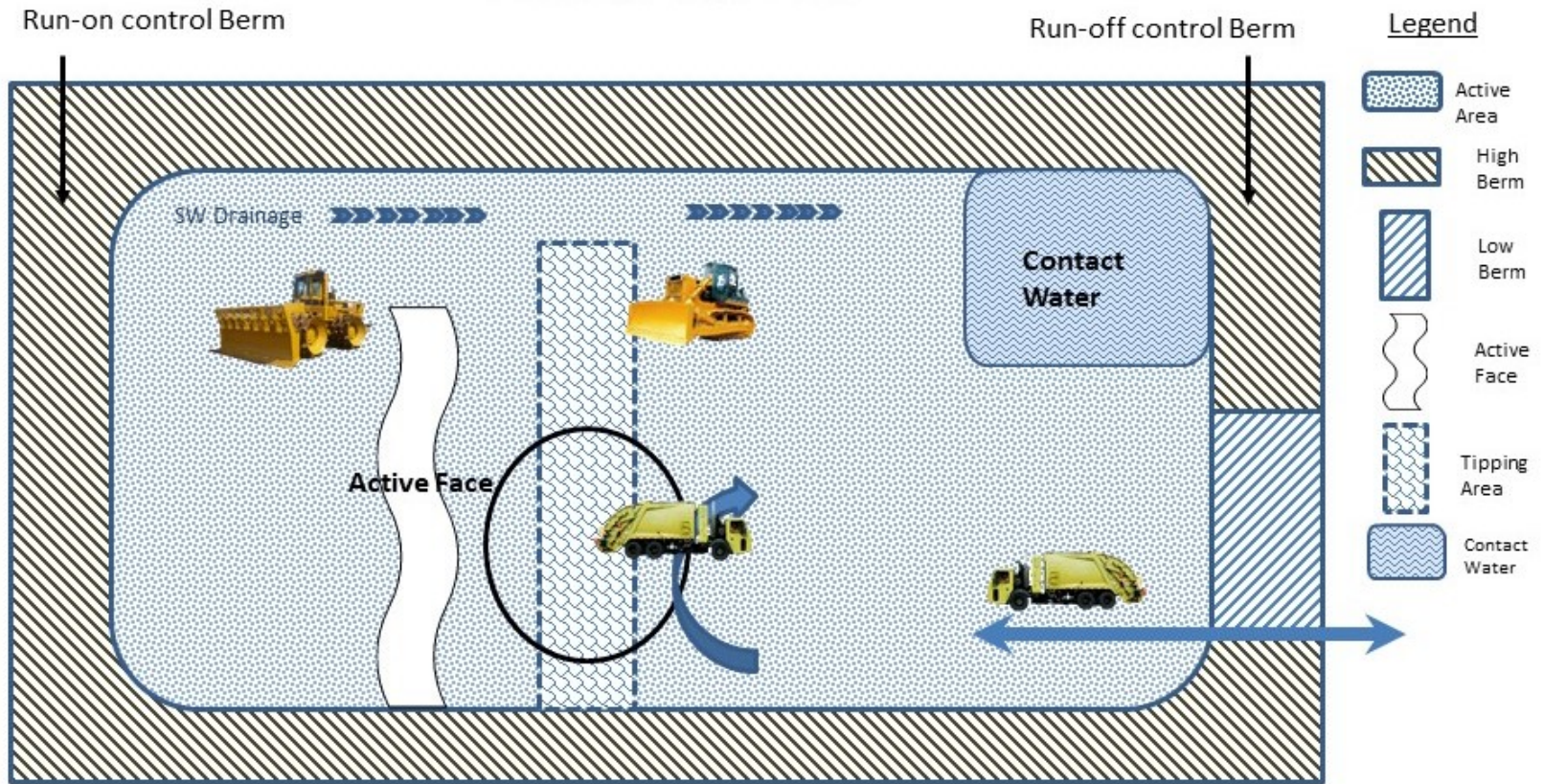


Our Mission: "To protect and improve the health and environment of all Kansans."





# Active Area Plan



# Active Area Cross Section

