



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

February 26, 2020

Kevin Roth, Street and Sanitation Superintendent
City of Mitchell
612 North Main Street
Mitchell, SD 57301

Re: Inspection of the Mitchell Municipal Solid Waste Landfill

Dear Mr. Roth:

On January 27th, 2020, Steve Kropp and I conducted an inspection of the Mitchell Municipal Solid Waste Landfill (permit number 17-15) with the assistance of Jay Tollefson and yourself. The purpose of this inspection was to review operation and maintenance of the landfill, and to determine if the operation of the landfill is in compliance with South Dakota solid waste disposal rules and the city of Mitchell's solid waste permit.

The inspection of the landfill showed that the operation and maintenance of the landfill is acceptable and with one exception in full compliance South Dakota solid waste laws and rules and the permit conditions. During the inspection it was discovered that for a less than a week in November 2019, both the primary and backup leachate pumps were inoperable. It is likely that leachate accumulated to a depth greater than 12 inches on a portion of the bottom liner system in the disposal area. Administrative Rule of South Dakota (ARSD) 74:27:13:24 states that leachate cannot accumulate to a depth greater than 12 inches over the liner system. The City of Mitchell needs to inform this office within 24 hours of a situation like this or any other emergency situation at the landfill.

If you have any questions, or if you would like to discuss the contents of the inspection report, please do not hesitate to contact me at (605) 773-4781.

Sincerely,

Seth Loffelmacher
Waste Management Program

Enclosure

**South Dakota Department of Environment and Natural Resources
Waste Management Program
Municipal Solid Waste Landfill Inspection Report**

Facility Owner: City of Mitchell Date of Inspection: January 27, 2020
Address: 612 North Main Street, Mitchell, SD 57301 County: Davison
Contact's Name, Title & Telephone #: Jay Tollefson, Landfill Manager, (605) 995-8448
Kevin Roth, Street & Sanitation Supt., (605) 995-8465
Date of Last Inspection: March 28, 2019 Permit #: 17-15 Type of Facility: IIA
Tonnage received for disposal in 2019: 38,033.76 tons
Tipping Fee: MSW - \$48/ton; Trees - \$20/ton; C&D - \$48/ton; PCS - \$10/ton; Tires - \$200/ton

Narrative

On the afternoon of January 27, 2020, Steven Kropp (Kropp) and I visited the City of Mitchell landfill to conduct its annual inspection. We met with Jay Tollefson (Tollefson) and Kevin Roth (Roth) at the Mitchell landfill scale house, and they accompanied us during the inspection. We began the inspection by reviewing the records and documentation required by the permit and discussing landfill operations.

We then traveled around the landfill and observed its constructed wetlands, storm water pond, compost runoff pond, and where various wastes are stored or disposed. One location we visited was a stockpile of approximately 30,000 tons of concrete, which was being temporarily stored on interim covered Cell 2 waiting to be crushed by an outside contractor. Roth said crushing should have already started by now, but that it should all be crushed by summer.

We arrived at the working face in time to see the workers apply the landfill's alternate daily cover (ADC) material called Posi-Shell, which was sprayed onto the municipal solid waste (MSW) with a hydro-seeder. There was some litter in the portable fences surrounding the working face.

We returned to the scale house to discuss additional solid waste issues. We thanked Tollefson and Roth for their time and left the landfill.

Pictures taken during this on-site inspection are attached to this report.

Design Standards (ARSD 74:27:12)

1. **All-Weather Roads:** South Dakota Highway 37 passes one and one-half miles west of the landfill. The primary access road (257th Street) that leads from the highway to the landfill is a blacktop paved road in good condition, which is maintained by the operator. The gravel access roads throughout the landfill are in decent shape.
2. **All-Weather Fill Areas:** The operator keeps the gravel access roads to the waste fill areas clean during inclement weather. The operator has all-weather access to the MSW disposal area.
3. **Posting Standards:** The main sign at the landfill entrances displays the name of facility, the manager's and superintendent's phone numbers, emergency contact information, days and hours of operation, and a warning that uncovered loads will be fined. Fees and prohibited wastes are posted at the scale house. Signs posted throughout the landfill direct drivers to waste disposal and storage locations.
4. **Public Access Control:** Access to the landfill is controlled using fencing, lockable gates at the main entrance of the landfill, and natural topography. The main gate is only unlocked during working hours.
5. **Litter Control Devices:** The operator uses portable litter fences at the MSW working face, fixed fencing around the MSW disposal area, and fixed fencing around the perimeter of the landfill to help control litter.
6. **Fire Control:** The fire lanes at the landfill are at least 25 feet wide.
7. **Buffer Zone:** A buffer zone of at least 100 feet is maintained within the perimeter fence.
8. **Truck-Washing Facilities:** Garbage trucks are washed at the Mitchell Street and Sanitation Department's shop. Wash water is piped into Mitchell's sanitary system.
9. **Waste Storage Areas:** All waste storage areas are outdoors, clearly separate from each other, and within the perimeter of the landfill.
10. **Personnel Facilities:** All required personnel facilities and equipment are in the scale house and equipment building.
11. **Surface Water Control:** The landfill is designed to divert normal surface water flow and storm water runoff away from the active fill area. Surface water is directed away from the MSW disposal area by perimeter ditches and storm sewer piping along with natural topography. Surface water is stored in a storm water pond located in the southwestern corner of the site. The landfill workers make periodic inspections of the water level in the storm water pond. The operator does have a storm water discharge permit for the storm water pond through the Surface Water Quality Program (SD00B408). The storm water pond has a culvert with a vertical slide gate so that it can be manually drained into the constructed wetlands south of the storm water pond. Tollefson said that the landfill discharged water from the pond last year on April 8 and September 19. He said that the storm water was sampled in accordance with the storm water discharge permit requirements.

Facility Operation (ARSD 74:27:13)

1. **Supervisory Personnel on Duty:** The landfill is open only when there are adequate supervisory and operational personnel on location. The landfill employs four full-time workers: one supervisor, two equipment operators, and one scale house operator.
2. **Determining Waste Tonnage:** Tonnage of incoming waste is determined by using a scale, which is located next to the scale house on the south side of the landfill. The scale is annually certified by the South Dakota Department of Public Safety – Weights and Measures Program. was last certified on September 19th, 2019.

At the time of our inspection, one of the scale's load sensors was suspected to be malfunctioning. The operator discovered the malfunction in December 2019, and contacted K-Scale, LLC from Sioux Falls to inspect the issue. The cause of the malfunction was determined to be a buildup of debris underneath the scale. The debris has since been removed, and K-Scale is expected to arrive within the month to verify that the scale is working correctly.

3. **Unloading of Wastes:** The landfill has separate unloading areas for yard waste, waste tires, white goods, refrigerant-containing appliances, pallets, tree branches, and MSW.
4. **Salvaging:** The operator has worked out agreements with multiple businesses to have salvageable or recyclable waste to be removed. Metal appliances/white goods are taken for recycling by H&R Salvage, LLC of Mitchell, SD. Lead-acid batteries accepted by the landfill are picked up by German Auto in Dimock, SD. Waste tires over 10-ply are taken for processing by New Deal Tire, LLC of Groton, SD. Refrigerants removed from appliances are taken for recycling to Johnstone Supply of Sioux Falls, SD. Clean wood waste from the tree branch and pallet piles is ground by Mueller Pallets, LLC in Sioux Falls, SD for recycling/reuse.
5. **Litter Control:** The operator uses portable litter fences at the working face and fixed litter fences around the MSW disposal area and around the perimeter of the landfill to help control litter. At the time of inspection, litter was caught in the portable fences. No litter was observed outside of the lined MSW disposal area.

The solid waste permit for this landfill requires the operator to perform at least daily litter pickup. Landfill staff performs daily litter pickup at the landfill and along 257th Street from the landfill to SD Highway 37. The operator also periodically picks litter along SD Highway 37 north to the south edge of Mitchell city limits. The Mitchell Street and Sanitation Department's collection workers also help pick up litter.

6. **Working Face:** The operator typically tries to keep the active working face of the landfill to 60 feet by 80 feet. At the time of inspection, the working face was visually estimated to be 80 feet by 120 feet.
7. **Spreading and Compaction:** Waste in the MSW disposal area is spread and compacted into lifts which vary between one and two feet in thickness. The operator compacts the waste with a GPS-equipped Bromag compactor. A minimum of three passes are made over an area with the compactor.

8. **Daily Cover:** The operator uses a spray-on alternative daily cover (ADC) called Posi-Shell to cover the wastes at the end of the working day. The operator is also allowed to use petroleum contaminated soil (PCS) as daily cover provided the PCS isn't a hazardous waste. The operator also uses six inches of soil or street sweepings as daily cover. The operator covers the waste with at least six inches of soil at least once per week when the ADC is used in accordance with permit condition 3.04.
9. **Completed Landfill Units:** There are no completed landfill units at this landfill.
10. **Open Burning Restrictions:** The operator currently does not burn any wastes.
11. **Equipment:** The landfill has a compactor, a front-end loader, at least two scrapers, and a spraying machine for ADC application. Backup equipment is available from the Mitchell Street and Sanitation Department.
12. **Vector Control:** No vectors were seen during the time of inspection. The operator mentioned they were dealing with raccoons climbing into their equipment looking for shelter.
13. **Scavenging:** Scavenging is prohibited at all SD landfills. The landfill perimeter is fenced, and the entrance gate is locked after operating hours.
14. **Fire Protection Plan:** The operator has a fire protection plan in place with the Mitchell Fire Department.
15. **Monitoring:** The landfill currently has fifteen active groundwater monitoring wells, which are maintained by the City of Mitchell. GeoTek Engineering and Testing Services (GeoTek) in Mitchell collects groundwater samples from the wells during their semi-annual monitoring events. The last monitoring event was in December 2019.
16. **Special Wastes:**
 - Hazardous Waste:** The operator has acceptable procedures in place to accept conditionally exempt small quantity generator (CESQG) hazardous waste at the landfill. The CESQC waste is disposed with regular MSW.
 - Pesticide containers:** The operator only accepts household-sized pesticide containers into the landfill, which must be punctured and triple-rinsed. Customers can dispose of pesticide containers through the SD Department of Agriculture's yearly pesticide container cleanup program that are held in the area.
 - Petroleum Contaminated Soils:** The operator requires PCS to be tested before accepting it at the landfill. In 2019, the landfill accepted 1,268 tons of PCS.
 - Asbestos:** The operator accepts wastes containing regulated asbestos, which is buried with MSW. The City of Mitchell Engineering Department records and maps the burial locations of the asbestos. The last load of regulated asbestos containing wastes the landfill accepted was in October 2019. The operator accepted 35 bags of regulated asbestos-containing waste which was removed from a local business by Gary Snow and Associates.
 - Regulated Medical Wastes:** No regulated medical wastes are accepted.

Dead Animals: Dead animals received by the landfill are mainly household pets, roadkill from the Mitchell police department, or scraps from meat lockers. Dead animals are disposed of directly in the active fill area and immediately covered with MSW.

Bulky Wastes: Bulky wastes, such as construction and demolition debris, furniture, mattresses, etc., are disposed along with normal MSW.

Lead-Acid Batteries: The operator accepts batteries from the public for temporary storage and recycling.

Waste Oil: Waste oil is not accepted from the public at the landfill. Customers are directed to local businesses that accept waste oil for recycling.

The operator has a 300-gallon tank on-site to store waste oil that is generated by landfill equipment. Dixon Oil picks up the stored oil for recycling approximately every nine months. Dixon Oil's last visit was on September 19th, 2019 where they picked up 250 gallons.

Liquids: The operator only accepts household quantities of liquid waste, which are disposed directly in the active fill area.

Ash: Ash coming into the landfill is primarily from a few farms' burn barrels. Ash is temporarily stored by the soil stockpile to cool and then mixed with soil to be disposed.

Sludge: Sludge received from the Mitchell wastewater treatment plant is disposed with MSW in lined disposal areas. The operator collected 298 tons of sludge in 2019.

Industrial Waste: The operator does not accept hazardous industrial waste. Nonhazardous commercial waste is disposed with MSW.

Refrigerant-Containing Equipment: The operator accepts appliances that contain refrigerants. The landfill staff is properly trained to remove the refrigerants from the appliances, and EPA-certified equipment is used in the process. The operator processed approximately 255 units at the landfill in 2019.

At the time of the inspection, the stockpile of refrigerant-containing appliances was larger than normal. This was because people needed to dispose of appliances which were damaged by recent flooding.

Yard Waste: The operator accepts yard waste from the public for composting. The landfill received 2,570 tons of yard waste in 2019. The composting area is located west of the scale house and has been constructed with a recycled asphalt/concrete base. The composting area has been designed to control surface water run-on and runoff. Surface water that comes into contact with yard waste is handled as leachate and is directed to a storage pond located west of the composting area. The finished compost is tested and registered with the SD Department of Agriculture.

17. **Waste Tires:** Waste tires less than or equal to 10-ply are quartered and buried with MSW. Tires over 10-ply are taken for processing by New Deal Tire, LLC of Groton, SD. The landfill charges \$200/ton for tires. In 2019, the landfill collected 328 tons of tires during a DENR sponsored cleanup program.
18. **Testing for Hazardous Waste:** The operator requires that industrial customers provide documentation that the wastes they generate which they wish to dispose of at the landfill are appropriate for disposal.
19. **Screening Waste Received:** The operator conducts random inspections of incoming waste loads to ensure no unauthorized wastes are being disposed of at the landfill. Landfill personnel are also trained to recognize hazardous or suspicious wastes. The load inspection sheet includes information as to the date of the inspection, vehicle identification, materials noted in the load, whether any additional action was taken and locations for the landfill worker and hauler to sign the inspection sheet.
20. **Training of Personnel:** Three landfill workers are Manager of Landfill Operations certified through the Solid Waste Association of North America. The landfill workers periodically have personnel and safety training with other City of Mitchell workers as well as attending SD Solid Waste Management Association meetings where additional training opportunities exist. All newly hired workers are trained on landfill operations.
21. **Recordkeeping:** The operator maintains computerized tonnage reports. A copy of the 2019 tonnage report is attached to this inspection report. Recycling services, which had been previously provided by Dependable Sanitation from Aberdeen, are now being provided by the City of Mitchell. The Mitchell Street Department recycles asphalt and concrete. Other recycling and reduction efforts are done at the county and local levels. The operator updated the Source Reduction and Recycling Plan for the landfill as part of the current permit renewal application.
22. **Leachate Management:** Leachate from the lined MSW disposal area is collected in a subsurface collection system which pipes the leachate to the Mitchell wastewater treatment facility for disposal. The treatment facility is adjacent to the landfill on the north side of the permitted boundary of the landfill. Last year the landfill disposed of 11,541,539 gallons of leachate during the months of January through October and December.

During the month of November 2019, the flow monitoring sensor was not operating due to equipment issues. So, the landfill doesn't have records as to the volume of leachate pumped for the month. Roth did mention that during November 2019, the primary leachate pump broke down and the landfill staff installed the back-up pump. They sent off the primary pump to be repaired. The back-up pump also broke down while the primary pump was being repaired. The total downtime when no leachate was being pumped was less than a week. It is likely during this downtime that leachate accumulated to a depth greater than 12 inches on a portion of the bottom liner system in the MSW disposal area. ARSD 74:27:13:24 states that leachate cannot accumulate to a depth greater than 12 inches over the liner system. The operator needs to inform this office within 24 hours of a situation like this or any other emergency situation at the landfill.

23. **Storm Water Management:** The landfill's storm water permit allows the operators to discharge from the storm water pond. The storm water is analyzed at each discharge.
24. **Methane Gas Monitoring:** Methane gas concentrations in all monitoring wells and site buildings are monitored quarterly by GeoTek. The most recent monitoring event took place in December 2019. A review of the 2019 methane gas monitoring results found in the 2019 annual ground water monitoring report showed that methane gas was detected at 100% of the lower explosive limit (LEL) in monitoring well MW-2s during all four sampling events. This well is located upgradient of the MSW disposal area and south of the northern boundary of the landfill. Permit condition 3.19 states that methane gas cannot exceed the LEL in the air or in the soils at the property boundary. This office has been in contact with the operator and GeoTek about the methane gas detections in the well. There have been preliminary discussions about determining the cause of the methane gas detection and the extent of the methane gas in the soil.

Closure and Post-closure (ARSD 74:27:15)

The operator reviews and updates the closure and post-closure plans every year. A review of the closure and post-closure plans as part of the current permit renewal application showed that they were adequate and in compliance with state rules.

Financial Assurance (ARSD 74:27:16)

The operator keeps written estimates for closure and post-closure costs on file and updates them every year. The updated costs are determined every year after the operator's engineering department performs its annual fill progression survey at the landfill. The most recent fill progression survey took place in December 2019. New estimates from that survey had not yet been determined at the time of the inspection.

Kropp received the 2019 accrued liability calculations for the landfill on February 21, 2020. The calculated accrued liability through the end of 2019 is \$576,407.81. The financial assurance balance at the end of January 2020 was \$633,262.87.

Transportation (ARSD 74:27:17)

There is a sign at the entrance to the landfill referencing a city ordinance (City Ordinance #1981, Section 30-23) that requires all incoming loads to the landfill must be secured to prevent littering. The transporter of an unsecured load is fined ten dollars.

Ground Water Monitoring (ARSD 74:27:19)

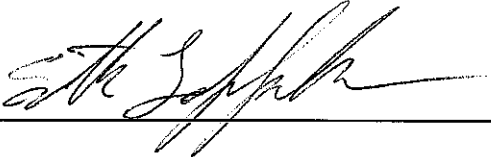
Ground water monitoring for the landfill is being conducted by GeoTek. The required annual report of statistical analysis for the 2019 ground water monitoring data for the landfill was received by our department on February 13th, 2020. The report has not yet been reviewed.

Requirements

1. The operator must ensure that leachate does not accumulate to a depth greater than 12 inches over the bottom liner system.
2. The operator must notify this office within 24 hours of an emergency situation at the landfill.

FACILITY RATING

Operations at the Mitchell Municipal Solid Waste Landfill are deemed: **ACCEPTABLE.**

Signature of Inspector:  Date: 02-26-2020

Signature of Inspector:  Date: 2/26/2020