

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

Facility Owner: Brown County Date of Inspection: June 28, 2005
Address: P.O. Box 2137, Aberdeen, SD 57402 County: Brown
Contact's Name, Title & Telephone #: Mike Scott, Landfill Manager, (605) 626-4019
Date of Last Site Inspection: March 5, 2005 Permit #: 02-19 Type of Facility: IIA
Tonnage received in 2004: 35,178 tons MSW & 5,471 tons rubble
Tonnage received Jan.-June 26, 2005: 17,601 tons MSW & 1,332 tons rubble
Tipping Fees: \$35 / ton MSW & \$10 or \$16 per ton rubble

Narrative

On June 28, 2005, I met with Mike Scott, landfill manager for the Brown County landfill at approximately 1:15 p.m. local time at the landfill. Mr. Scott accompanied me during the inspection.

We began the inspection by traveling around the landfill where we spent about an hour and a half observing and discussing solid waste handling and disposal practices as well as landfill operations. While traveling around the landfill, I used a Global Positioning System (GPS) to map the perimeter of the permitted area of the landfill as well as the municipal solid waste (MSW) disposal area. We returned to the landfill office where we further discussed solid waste operations, reviewed records and documentation required by the operator's solid waste permit, and other solid waste issues. We spent some time discussing the anticipated closure of the current MSW disposal area in 2011 or 2012, as well as the required site characterization information that will be needed for the west half of the permitted area of the landfill when it's developed for MSW disposal. I left the landfill at approximately 4:30 p.m. Pictures were taken during the on-site inspection and are attached to this report.

Design Standards (ARSD 74:27:12)

1. There is a blacktop road that leads from the entrance of the landfill south to US Highway 12. This is the primary access road leading to the landfill. The on-site roads at the landfill are well maintained and contain adequate gravel and are suitable for all-weather travel by loaded vehicles. The operator has provided roll-off boxes near the scale house that can be used by the public during inclement weather conditions. Landfill employees transport the roll-off boxes to the active fill area where the waste is unloaded. The operator has built a hoop-barn structure for commercial haulers to use during inclement weather conditions. The hoop-barn structure is located west of the MSW fill area. The hoop-barn structure can hold three days worth of MSW and is very useful during windy weather conditions.

2. There are signs posted at the entrance to the landfill with the following information: name of the landfill, name and phone number of the manager, days and hours of operation (M-F, 8am-5pm and Sat. 8:30am-5pm), and other required information. There are signs posted around the landfill for the various waste storage and disposal areas. Information about the tipping fees charged at the landfill is available at the scale house. Access to the landfill is controlled by the use of fencing and a lockable gate at the main entrance. The main gate is locked when the facility is closed.
3. The operator uses portable litter fences at the face of the active unloading area to help control litter. Also, there are semi-fixed litter fences within the MSW disposal area, as well as fixed litter fences around the lined MSW disposal area and the perimeter of the landfill. There was very little litter noted outside of the active MSW working area, but it was within the perimeter of the MSW disposal area. No litter was noted outside of the permitted boundary of the landfill.
4. The operator has an area south of the scale house that has been well designed and organized to temporarily store various wastes for future recycling. The operator has temporary storage areas for yard waste, waste tires, white goods, used oil, paint, batteries, propane tanks and antifreeze. The landfill has the required personnel facilities and equipment located in the landfill maintenance building and at the scale house.
5. Surface water is diverted around the active fill area by a series of open earthen ditches and culverts to a storm water pond located south of the active fill area. There is another storm water pond located in the south central portion of the permitted area that also collects storm water runoff. The operator has obtained a storm water discharge permit (SDR00B097) through the Surface Water Quality Program in the event that a discharge is necessary from the storm water pond.

Facility Operation (ARSD 74:27:13)

1. The landfill employs five full-time and two part-time employees. The landfill is only open when there are adequate supervisory and operational personnel at the landfill. The landfill has an adequate scale that is located south of the scale house. The landfill has the scale certified annually by the South Dakota Department of Revenue and Regulation.
2. The operator maintains a MSW working area that is approximately 100 feet long by 50-75 feet wide. The operator spreads the waste in lifts that are no more than two feet in thickness. The compactor operator typically makes a minimum of three to five passes over the MSW to ensure the waste is sufficiently compacted.
3. The operator uses a spray-on alternative daily cover material to cover the MSW at the end of the working day. The operator is also permitted to use a wood chip and soil mixture as an alternative daily cover material. The operator uses soil as cover at least weekly to meet a permit requirement that requires soil to be used once per week as cover. The operator uses soil more frequently during inclement weather conditions.
4. The operator uses propane powered gas cannons, screamers, and bangers as the primary means of discouraging seagulls. Mr. Scott stated that the landfill has recently

purchased an electronic distress call system to be used to discourage the presence of starlings and seagulls. Mr. Scott indicated that the system has not yet been set up.

5. The operator's solid waste permit requires that the operator perform at least daily litter pickup at the landfill. Mr. Scott stated the landfill employees perform daily litter pickup at the landfill. Mr. Scott said that the landfill also uses inmates from the Brown County jail to help pick up litter at the landfill on an as needed, as available basis. The landfill employees also use a Mad Vac to help pick up litter at the landfill. The landfill uses portable litter fences at and around the working face, semi-fixed litter fences within the MSW disposal area and fixed litter fences around the permitted area of the landfill and the lined MSW disposal area to control litter.
6. The operator accepts a number of special wastes for disposal or temporary storage and future recycling. The operator does accept petroleum-contaminated soil (PCS) for treatment and disposal. The operator requires pretreatment contamination levels of the PCS prior to acceptance. The operator has a treatment area located southwest of the lined MSW disposal area. The treatment area is bermed to control run-on and runoff. The operator has the runoff from the treatment area tested to determine the effectiveness of the treatment area at protecting surface water. The test results are included in the landfill's annual monitoring report. The operator turns the PCS at least weekly during the months of April through October to promote remediation. Once the PCS contamination drops below 100 parts per million total petroleum hydrocarbons, the soil is disposed of in the MSW disposal area. The landfill does accept asbestos for disposal. The operator disposes of the asbestos in a separate bermed area. The operator accepted 79 bags of asbestos for disposal in 2004 and 49 bags so far in 2005. The operator does accept dead animals for disposal at the landfill. The dead animals mainly come from a local fur and trapping company. The dead animals are disposed of in the MSW disposal area. The operator has disposed of approximately 57 tons of dead animals so far this year.
7. The landfill accepts materials that could go to a restricted use facility for disposal. The landfill operates a separate disposal area that is located west of the scale house. The only types of materials allowed to be disposed of in this area are concrete, brick, asphaltic concrete, painted and stained wood, attached insulation and similar wastes. The operator periodically uses the compactor to compact these wastes. Materials such as mattresses, carpet, or furniture are disposed of in the lined MSW disposal area. The operator has begun to track loads of restricted use type materials mixed with MSW. These loads are disposed of in the lined MSW disposal area. The landfill has accepted approximately 917 tons of mixed loads for disposal. The landfill accepts lead-acid batteries from the public for temporary storage and future recycling. The batteries are stored in a plastic containment basin. The containment basin offers protection in the event a lead-acid battery leaks. The operator has Mardian's in Aberdeen come to the landfill to pick up the lead-acid batteries for recycling. So far this year, Mardian's has accepted 550 lead-acid batteries from the landfill. The landfill also accepts waste oil from the public. The waste oil is stored in 250-gallon tanks and the tanks are clearly labeled as waste oil. The landfill has accepted 2,500 gallons of waste oil so far this year. The Brown County Highway Department periodically comes to the landfill to pump out the waste oil. The Brown County Highway Department burns the waste oil at the county maintenance shop as a source of fuel.

8. The landfill accepts appliances and white goods that contain refrigerants for temporary storage and recycling. The operator has Brick's TV & Appliance Repair come to the landfill to remove the refrigerants. The operator transports the white goods and other salvageable metal to Mardian's for recycling. The operator hauled 1,105 tons of salvageable metal from the landfill in 2004 and 175 tons so far in 2005 for recycling.
9. The operator accepts yard waste from the public for composting. The composting area has berms built to control storm water run-on and runoff. The operator places the yard waste in windrows and adds moisture to yard waste to promote composting. The finished compost is registered with the SD Department of Agriculture as a soil amendment and is given away free to the public. The landfill also accepts waste tires from the public for temporary storage. The designated waste tire storage area is located near the scale house. Mr. Scott estimates that the landfill has accepted 25,000 waste tires so far this year. Approximately 15,000 waste tires are currently on-site. The operator has an agreement with New Deal Tire, Inc. in Groton to haul the waste tires to their plant where the waste tires will be processed into tire chips that are burned as an alternative fuel at the Big Stone Power Plant.
10. The operator conducts random inspections of incoming waste loads to ensure no unauthorized wastes are being disposed of at the landfill. Landfill personnel are trained to recognize hazardous or suspicious wastes. The scale operator makes random inspections at the scale house. The operator has a mobile platform set up at the scale house so that the scale operator can make an inspection on large loads of wastes that are brought to the landfill. The scale operator makes a notation on the scale ticket that an inspection had been performed. The operator maintains a logbook on all of the waste inspections that are performed.
11. The operator conducts safety and landfill operations training meetings for all landfill employees. Mr. Scott stated that he sends the landfill employees to various SD Solid Waste Management Association meetings where additional training opportunities exist. The operator maintains computerized tonnage reports. Mr. Scott provided a tonnage report at the time of the inspection for all of the materials that have been accepted at the landfill so far this year. .
12. The operator has hired Helms and Associates of Aberdeen, SD, to perform fill progression survey calculations at the landfill. Helms and Associates was at the landfill last fall performing fill progression calculations. The operator maintains copies of past permit applications, permits, plans and specifications and other required information at the scale house, Helms and Associates, and the Brown County courthouse.
13. Leachate from the lined MSW disposal area is collected in a subsurface collection system and routed to a 10,000-gallon tank. The operator periodically pumps out the leachate and recirculates the leachate over the lined MSW disposal area. In the past, the operator transported the leachate to the Aberdeen wastewater treatment plant for disposal. The operator has the leachate sampled in accordance with the requirements for the city of Aberdeen's wastewater discharge permit as well as the ground water monitoring parameters for the landfill. The landfill recirculated 533,000 gallons of leachate in 2004.

14. The operator has hired Minnesota Valley Testing Laboratory (MVTL), New Ulm, MN, to perform ground water monitoring and methane gas testing at the landfill. A review of the methane gas testing results for 2004 showed that the only location where methane gas was detected was in the leachate tank manhole at four percent of the lower explosive limit for methane.

Closure and Postclosure (ARSD 74:27:15)

The operator updated the closure and postclosure plans when the operator submitted its solid waste permit renewal application in 2001. A review of the closure and postclosure plans at that time showed that the plans were adequate and in compliance with state rules. Since the permit renewal, the operator requested a modification to the closure plan to increase the closure area to 15 acres. This modification was approved provided that the associated closure costs would be increased. The operator provided documents showing that the closure costs had been increased as well as adjusted for inflation.

Financial Assurance (ARSD 74:27:16)

There is a written estimate for closure and postclosure costs in the file. The estimated amount is \$1,470,000. As of December 31, 2004, the operator had deposited \$681,617 in certificates of deposit for closure and postclosure costs. The operator also has \$187,513 in restricted assets to fund future closure and postclosure costs. While not required by this department, the operator has also voluntarily restricted \$240,000 for potential remedial action. The financial assurance mechanism for the closure and postclosure accounts is adequate and in compliance with the rules.

Transportation (ARSD 74:27:17)

Brown County has an ordinance that requires all loads to be covered and secured. The transporter of an unsecured load is given a warning ticket for the first offense. For a second offense, the violator is turned over to the state's attorney for prosecution. The operator has established the *Covered Load Appreciation Program* at the landfill. The program was set up to educate the users of the landfill that the rules and local ordinances require that all incoming loads must be secured. The operator randomly rewards landfill users who have covered and/or secured loads with various thank you gifts.

Ground Water Monitoring (ARSD 74:27:19)

The operator has hired MVTL to perform ground water monitoring at the landfill. Earth Tech Inc., Minneapolis, MN, prepared the required 2004 Annual Ground Water Monitoring Report and submitted the report to this department on March 31, 2005. On April 12, 2005, Earth Tech submitted a proposal to sample an alternative list parameters in lieu of the 40 Code of Federal Regulations (CFR) Part 258 Appendix I total metals. Part 258.54 of 40 CFR allows alternative parameters to be sampled for in lieu of the total metals. On April 27, 2005, this department approved the alternative parameter list and made an administrative change to Attachment A of the operator's solid waste permit as allowed in permit condition 5.03.

Recommendation

1. I would like to commend you and your staff for their diligent efforts in the operation of the Brown County landfill.

FACILITY RATING

Operations at the Brown County municipal solid waste landfill are deemed: **Acceptable**

Signature of Inspector: _____ Date: _____