NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(Pursuant to the Solid Waste Disposal Regulations of the Nevada Administrative Code [NAC] 444.641.3[b])

Permittee Name: Nye County

Facility Name: Round Mountain Landfill

Permit Number: SW98REV01

Description of Proposed Permit Modification

None at this time

Location Information

The subject property for the landfill expansion area is a parcel approximately 40 acres in size located in the western portion of Section 12, Township 10 North, Range 43 East, Mount Diablo Base and Meridian (MDB&M) and is adjacent to and east of the existing Round Mountain Landfill site.

Proposed Action

None at this time

Facility Summary

SITE LOCATION

Nye County, Nevada, currently operates an existing municipal solid waste (MSW) landfill located approximately two miles northeast of Hadley, Nevada, and one mile north of the intersection of State Routes 376 and 378. The landfill is located in Big Smoky Valley and can be accessed from State Route 376. The existing facility is located on public land leased from and administered by the Bureau of Land Management (BLM), Tonopah Field Station. The proposed expansion facility is located on public lands administered by the BLM which Nye County is currently seeking to transfer to county ownership through the Recreation and Public Purposes Act (R&PP Act - case 240006 NVN 57453). Figure 1 presents the project location.

ADJACENT PROPERTIES

The site property is bounded by undeveloped Federal land administered by the BLM, Tonopah Field Station. The area consists of open rangeland.

LAND OWNER/OPERATOR

Nye County will act as owner and operator of the facility.

SITE ACCESS

The current landfill and the proposed expansion can be accessed from State Route 376 by traveling approximately one mile north of the intersection of State Routes 376 and 378 and then one-half mile east-northeast on the county road (Figures 1 and 2). The access road transects public lands. Nye County holds the right-of-way grant (BLM File N-53177) for the access road to the existing landfill and will seek to obtain an extension of the right-of-way to access the proposed site.

AUTHORIZED AGENT

The Department of Public Works of Nye County will be the authorized agent for the Round Mountain Landfill Expansion and will be responsible for directing a subcontractor for the operation of the proposed facility.

FACILITY CLASSIFICATION

The expansion facility will be designated as a Class II site as defined by NAC 444.571. The amount of municipal solid waste to be accepted at the landfill expansion site is not anticipated to exceed 20 tons per day (tpd).

WASTE QUANTITIES

The current disposal capacity estimate , assumes a per capita waste generation rate of 6.0 pounds per person per day. The population of the contributing areas is estimated at 2,000 people at this time. Based on this rate and population, approximately 6 tons of municipal solid waste are generated per day. With an assumed waste to cover ratio of 1:1 and compacted refuse density of 750 pounds per cubic yard, the estimated life for the expansion portion of the MSW unit as shown on the engineering drawings included in Appendix A is at least 40 years.

The expected growth rate for Nye County should not affect the Class II designation over the life of the landfill

SERVICE AREA

The landfill site will provide disposal capacity for the communities of Hadley, Carvers, Manhattan. Belmont, and surrounding areas.

WASTE CHARACTERIZATION

The proposed landfill expansion site will accept municipal solid waste primarily consisting of household, commercial, and light industrial waste. Hazardous wastes and liquid wastes will not be accepted at the site. Special wastes that will be received at the site will include tires, asbestos, medical wastes, and dead animals. Construction and demolition (C&D) waste will be received at the site and managed in a separate unit from the MSW unit to maximize the landfill capacity for municipal solid waste.

TOPOGRAPHY

The proposed landfill area is northeast of Hadley in the Basin and Range physiographic province. This province is characterized by elongated, generally northerly trending, fault-bounded bedrock mountain ranges separated by alluvial valleys. The site is located in Big Smoky Valley, an intermontane valley that separates the Toiyabe and Toquima Mountain Ranges. The proposed landfill lies on the eastern side of Big Smoky Valley, a few miles west of the Toquima Range front (BLM, 1996b). Site elevations range from approximately 5,825 feet above mean sea level (AMSL) to 5,845 feet AMSL (Figure 2, USGS Datum). Slopes at the site are approximately 1 percent to 8 percent with the site generally sloping to the west-northwest. Figures 2 and 3 show the existing topography and geographical features of the region.

GEOLOGY

Regional Geology

In the proposed Round Mountain Landfill project area, the oldest basement strata consists of Paleozoic-age quartzite, phyllitic shale, and argillite. Shawe (1977) reports that these metasedimentary rocks were intruded by a series of Cretaceous-age intrusive stocks of granitic composition. Subsequently, these basement rocks were overlain by a sequence of Tertiary-age welded tuffs deposited by a series of volcanic eruptions. It is during the Tertiary period that the region was subjected to extensive volcanism and caldera development (BLM, 1996b).

Site Geology

The site is located on the downslope edge of an alluvial fan which ranges in thickness from 500 to 5,000 feet and increases in depth toward the central and western margins of the valley. The depth of alluvium on the site is unknown; however, a log for a water well in Section 28, Township 10 North, Range 43 East (about three miles southwest of the proposed site) indicates the presence of sand, gravel, and cemented sand to a depth of 495 feet. Because of the range front faulting along the Toquima range and the associated downdropping of Big Smoky Valley, it appears that the alluvial cover thickness at the landfill site is at least 500 feet, probably exceeding 1,000 feet, and may reach as much as 3,000 feet in depth.

SOIL CONDITIONS

According to the Soil Survey of Big Smoky Valley Area, Nevada performed by the Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service), soil at the proposed landfill site is mainly within the Broyles and Quima Associations (Map Units BrA and QrA). The following paragraphs are based on the NRCS soil survey and present descriptions which are characteristic of these soils (NRCS, 1980).

SURFACE WATER

Surface water in the vicinity of the project site occurs in ephemeral drainages which flow only in response to precipitation events and snowmelt run-off. These ephemeral drainages originate in the Toquima Range in the east and terminate within Big Smoky Valley, a topographically closed basin. Run-off normally infiltrates into the alluvial fan before reaching the valley floor.

GROUNDWATER

The proposed project site is within the Big Smoky Valley—Based on well logs obtained from the Nevada State Engineer's office, groundwater at the site is estimated to be a minimum of 100 feet below the ground surface. A borehole drilled at the site indicates that groundwater is approximately 205 feet below ground surface.

CLIMATOLOGY

The landfill expansion site is located at latitude N38:44:30 and longitude Wl 17:06:30 at an average elevation of 5,835 feet AMSL (USGS Datum). Data recorded at the Smoky Valley and Tonopah Airport Stations include temperature.

Temperature

The average mean, mean minimum, and mean maximum monthly temperatures are presented in Table 2-2.1. Monthly mean temperatures range from a high of 72.5 degrees Fahrenheit (°F) in July to a low of 29.5°F in January. Monthly mean minimum temperatures range from 14.9°F in January to 56.3°F in July. Monthly mean maximum temperatures range from 43.4°F in January to 91.2°F in July. The average annual mean temperature is 51°F.

Annual Precipitation

Based on information obtained from the Smoky Valley Station (6.83 inches) and Tonopah Airport Station (5.29 inches), the mean annual precipitation for the site is approximately 7.0. The average annual snowfall is 6.46 inches at the Smoky Valley Station and 13.27 inches at the Tonopah Airport Station. The mean monthly snowfall and total precipitation data are presented in Table 2-2.

DESIGN CRITERIA

Design features of the site, will not create unstable areas or areas susceptible to mass movement. Overall slopes at the site are relatively flat (approximately 1 percent to 8 percent) and will not present significant potential for mass movement of the waste. The municipal solid waste unit will be composed of subsurface trenches and/or area fill The final cover design will cap the subsurface trenches with minimal increases in overall elevation. This, coupled with the relatively flat slopes at the site, precludes the need for an engineering analysis for stability. However, if alternative designs for final closure are proposed which would change the fill height or slopes or would include the use of geosynthetics (particularly smooth geomembranes), an engineering stability analysis would be prepared to demonstrate that unstable conditions would not exist with a proposed alternative design. The run-off control detention basin has been designed with an engineered fill embankment with 3 H: IV side slopes. The maximum height of the embankment is approximately 6 feet. The technical specifications require compaction of the engineered fill. Proper construction and maintenance of the run-off control basins will ensure stability of the basin as designed.

PROPOSED EXCAVATION

The site will be operated as a trench landfill or as a modified trench/area fill in the municipal solid waste cells

utilizing cut and cover techniques. The landfill area includes approximately 25 acres for disposal of municipal solid waste. Dead animal pits and C&D disposal areas will be located as shown on the engineering drawings included in the application. Excavations will also be made to construct perimeter roads and ditches. All required cover soil and closure cap materials (except low permeability soils or admixtures, if utilized) will be obtained from on-site excavations.

DEVELOPMENT SEQUENCE

Disposal of wastes in the Round Mountain Landfill Expansion site will be sequenced approximately as shown on the site development plan included with the engineering drawings in Appendix A. In general, the landfill trenches in the expansion area will progress in approximate yearly increments from the southeast corner toward the west and north. The landfill expansion is estimated to have a life of at least 40 years.

LANDFILL FINAL GRADES

The final elevations of the site are based on the volume of the waste received during the expected life of the project. The engineering drawings in Appendix A include a Final Closure Plan (Drawing 97249-04) which shows the anticipated final closure contours. In general, it is assumed that the final landfill elevations will be approximately 10 feet higher than the surrounding existing ground elevations. The maximum elevation shown on the drawings is 5,928 feet AMSL and occurs in the southeast corner of the site. The final surface will slope to the west-northwest and vary from approximately 3 percent to 8 percent on the surface. Outside slopes around the landfill expansion perimeter will be 5H: 1V or flatter.

FINAL COVER

The prescriptive requirements under NAC 444.6891 for design and construction of a system for final cover are as follows:

Design and construct a low-permeability infiltration layer which contains at least 18 inches of earthen material with a permeability which is less than or equal to 1 x 10"5 centimeters per second (cm/sec); and

Minimize erosion by designing an erosion control layer which contains at least 6 inches of earthen material and is capable of sustaining the growth of native plants. The quantity of the proposed cover will depend on the actual area of the landfill utilized. Preliminary calculations indicate that approximately 97,000 cubic yards of compacted soil to a depth of 24 inches (18 inches of infiltration layer and 6 inches of erosion/vegetative layer) will be needed for the final cover to accomplish site closure of the landfill expansion area. Approximately 11,000 cubic yards of final cover material will be required for the post-October 1997 areas of the existing landfill. If the on-site soils can not meet the required permeability value for the low-permeability infiltration layer, then suitable material will be imported from another source.

DRAINAGE SYSTEM

The proposed drainage control system will be implemented to manage the storm water run-on and run-off at the site by constructing the drainage improvements at the initiation of site expansion development. Surface water diversion ditches and/or berms will be constructed to divert surface flow around the operating and disposal areas. The ditches and/or berms will be sized to divert peak flows from a 25-year, 24-hour storm event. Run-off control structures will be constructed below the operating and disposal areas to contain the storm water volume resulting from the 25-year, 24-hour storm event. The permanent drainage improvements designed for this site are shown on the engineering drawings included in Appendix A.

Storm water run-on from upgradient of the site will be directed to the drainage system designed to divert run-on around the landfill areas. Run-off from the landfill areas will be directed to the run-off control basin prior to being discharged from the site. Storm water run-on and run-off will be discharged from the site through riprap outfalls as shown on the engineering drawings in Appendix A.

Run-On Control

Run-on control channels and berms have been designed to transport the 25-year, 24-hour storm event around the municipal solid waste disposal areas. The run-on control channels around the disposal areas will be V-ditches with 3:1 sideslopes and a minimum of 1.5 feet deep. The run-on control berms will be a minimum of 4 feet high with a crest width of 8 feet and side slopes of 3H: IV.

Run-Off Control

Run-off control ditches will be constructed downgradient of the landfill areas where municipal solid waste is disposed. These ditches will be a minimum of 2.5 feet deep and will divert run-off from the landfill area to the storm water control basin. The basin will be constructed with the initial landfill expansion construction and will be maintained throughout the active landfill life and through the postclosure period (as necessary). A 30-inch diameter CMP culvert will be installed under the access road to carry run-off from the western portion of the site to the storm water control basin. A second 30-inch diameter CMP culvert will be installed under the perimeter road to carry run-off from the northeastern portion of the expansion site to the basin.

Temporary run-off control ditches will be maintained and modified throughout the active site life of the landfill to support operational requirements. All temporary run-off control ditches will have a minimum depth of 12 inches and will be placed as necessary to accommodate all active landfill disposal trenches and cells.

Storm Water Control Basins

A run-off control basin has been designed to contain the run-off volume resulting from the 25-year, 24-hour storm event. The layout and cross section for the basin are shown on the engineering drawings included in Appendix A. The required basin capacity is approximately 2.6 acre-feet.

An overflow spillway will be constructed. The spillway will control storm water if storm water volumes in excess of basin capacity occur. The spillway will be rip rapped in order to minimize erosion impacts to the ephemeral drainage.

Document Availability

The ADMINISTRATIVE RECORD, which includes the DRAFT PERMIT, and correspondence are available for public review by appointment between 8:00 AM and 5:00 PM, Monday through Friday, at the Division offices located at: 901 S. Stewart St., Suite 4001, Carson City, NV 89701-5249.
Contact: Paul Eckert at (775) 687-9477, or by e-mail at: PEckert@ndep.nv.gov

Procedure for Public Review

Questions or comments may be submitted on or before the end of the public comment period.

In writing: Paul Eckert, P.E.
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web: News and Public Notices

The Division's Notice of Intent to approve the modified Permit for this facility, subject to the conditions contained in the Permit, will be published in a local newspaper. Additionally, the Public Notice will be mailed to interested persons on our mailing list. The Division will accept written comments on the proposed draft permit

from all interested persons until the end of the public comment period.

Will there be a public hearing?

N/A

When does the comment period end?

N/A