



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: Tonopah Landfill

Permit Number: SW103REV01

Description of Proposed Permit Modification

None at this time

Location Information

The landfill is located in Ralston Valley and can be accessed from U.S. Highway 6. The property for the landfill area is a parcel 80 acres in size located in the northern portion of Section 4, Township 2 North, Range 43 East. Mount Diablo Base and Meridian (MDB&M). The landfill can be accessed from U.S. Highway 6 by traveling approximately 6 miles east of Tonopah and then south for approximately one half mile.

Proposed Action

None at this time

Facility Summary

Facility Classification

The facility is a Class 11 site as defined by NAC 444.571. Nye County will comply with all applicable local, State, and Federal regulations with regard to the volume and type of wastes accepted under this classification. The amount of municipal solid waste to be accepted at the landfill is not anticipated to exceed 20 tons per day (tpd).

Service Area

The landfill provides disposal capacity for the town of Tonopah, Nevada, and surrounding areas.

Waste Characterization

The landfill 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.

Design

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. The run-off control detention basins have been designed with an engineered fill embankment with 3H:1V side slopes. The maximum height of the embankments are 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 basins as designed.

Existing Site Conditions

Topography

The area considered for the Tonopah Landfill is located on the eastern flank of the San Antonio Mountains, in the southern Ralston Valley. The topography of the area utilized for landfill disposal exhibits moderate relief while the hill areas to the west are relatively steep. The site is on a northeasterly facing slope with site elevations ranging from 5,670 to 5,800 feet above mean sea level (AMSL). Slopes at the site are approximately



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2 percent to 10 percent with the site generally sloping to the east.

Geology

Regional Geology

The regional geology is summarized from Geology of Northern Nye County, Nevada, by Kleinhampi and Ziony, 1985. The project area is located east of Tonopah in southwest Nevada in the Basin and Range physiographic province which is characterized by elongated, generally north-south trending, fault-bounded bedrock mountain ranges separated by alluvial valleys. The landfill site is located on the east side of the San Antonio Mountains, on the southwestern edge of Ralston Valley. The San Antonio Mountains are thought to be a southern extension of the Toquima Range, which bounds Ralston Valley on the northwest. The San Antonio Mountains consist of Tertiary volcanic rocks that are cut by high-angle normal faults. Tertiary rock units exposed in the vicinity of the project site include (in order of decreasing age) andesitic to basaltic rocks, rhyolitic rocks, the Fraction Tuff, sedimentary strata with intercalated tuffs, and dacitic and quartz latitic rocks.

Site Geology

The landfill site is located primarily on alluvial material on the east side of the San Antonio Mountains at the southwestern end of Ralston Valley. The depth of the alluvium increases toward the east and varies from zero to more than 100 feet in thickness. The alluvium consists of very coarse, poorly rounded gravels in a sandy matrix. One or more Tertiary volcanic rock units (described in Section 2.2.1) are inferred to underlie the alluvium.

Soil Conditions

The soil is derived from volcanic residuum and colluvium. The soil's permeability is moderately slow, hazard by erosion is slight, and hazard by wind erosion is moderate.

Surface Water

Surface water resources near the landfill site include two ephemeral drainages; one is located to the north and one to the south. Run-off from occasional isolated precipitation events causes the majority of flow in these ephemeral drainages. During storm events, run-off from the existing landfill site flows into the drainage channel located north of the landfill site. Based on a review of the Nye County Planning Department Hood maps which are derived from Flood Insurance Rate Maps, the Tonopah Landfill site is not located within the 100-year flood zone.

Groundwater

Groundwater at the site is estimated to be at least 200 feet below the ground surface and possibly much deeper. The wells closest to the site are approximately 5 miles east-southeast at the Tonopah Airport, approximately 4 miles north near Slaughterhouse Spring and Ice House Spring, and approximately 6 miles northeast and 9 miles east in the center of Ralston Valley. The well to the north of the landfill near the two springs is completed in the volcanic rocks of the San Antonio Mountains and has a depth to groundwater of 198 feet. The other three wells are completed in the alluvium of Ralston Valley. The Tonopah Airport well was dry to a depth of 264 feet where it was abandoned. The other two alluvial wells have depths to groundwater of 380 feet and 480 feet. The Tonopah Landfill is located at the western edge of the Ralston Valley, where the thickness of the alluvium ranges from less than 20 feet to more than 100 feet. It is likely that groundwater would be encountered at a depth of approximately 200 feet in the volcanic bedrock under the alluvium.

Climatology

The weather stations selected to best represent the climatic conditions at the Tonopah Landfill are the Tonopah Station (identification number 8160) and Tonopah Airport Station (identification number 8170). The Tonopah Station was located at latitude N38:04:00 and longitude W117:14:00 at an elevation of 6,024 feet AMSL and



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was in operation from 1928 to 1954. The Tonopah Airport Station is located at latitude N38:04:00 and longitude W1 17:05:00 at an elevation of 5,430 feet AMSL and has been in operation since 1954. The landfill site is located at latitude N38:03:30 and longitude W1 17:09:30 at an average elevation of 5,735 feet AMSL. Data recorded at the Tonopah and Tonopah Airport Stations include temperature and precipitation and was obtained from the EarthInfo. Inc. database. Other stations and/or sources are referenced for wind and evaporation data.

Facility Operations

Site Attendant/Personnel

The site will be staffed with a minimum of one attendant during all daily operating hours. The attendant's duties include covering of wastes, litter control, record-keeping, maintaining the hazardous waste exclusion program, inspection and acceptance of used oil (if Nye County elects to implement a used oil recycling program), site inspections, enforcement of all site regulations, and ensuring of public health and safety. The site attendant will operate the equipment to compact and cover the waste at the end of each operating day or, as required, to immediately cover special wastes. As needed, additional personnel will be brought to the site to operate the site or for projects such as trench construction, site improvements/maintenance, and litter cleanup. The additional personnel will be provided either by the county or by private operators under contract to Nye County. Training for the site attendants will be in accordance with accepted industry standards and as required by law and will be regularly updated.

Operating Hours

The Tonopah Landfill will be open for acceptance of municipal solid waste during times established by Nye County. The schedule for operating hours will be similar to the hours for the existing Tonopah Landfill which currently operates during daylight hours only. The facility gate will be locked during all non-operating hours, and a sign designating the hours of operation will be posted at the entrance.

Wastes

Green Waste

At the discretion of Nye County, an area within the site boundary may be utilized for composting of green waste (e.g., brush, yard trimmings, non-treated wood waste, and grass clippings). If implemented, the green waste pile will be separated into two areas: one for small or chipped debris and one for large brush, lumber, and stumps which require chipping. Chipping of large materials will be conducted on an as-needed basis with the resulting chipped material added to the small debris pile. The end-product compost will be used by Nye County and may also be made available to the public as determined by the county.

Construction and Demolition Material

Construction and demolition (C & D) material will be accepted at the Tonopah Landfill, providing the waste meets the definition established by the solid waste management authority and does not contain liquid or hazardous wastes. The C & D material will be disposed of in separate trenches within the site and will be managed to optimize disposal of inert wastes which do not require daily cover. Upon completion, C & D material in the cell will be capped with an interim cover layer and ultimately with the required final closure. The C & D material will not be allowed to intermix directly with MSW debris. If large quantities of C & D material of a combustible nature are accepted, the wastes will be cross-sectioned into cells using compacted cover material to reduce the risk of accidental fires.

Special Wastes

Tires



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Tires will be accepted at the Tonopah Landfill for disposal or for storage and transfer to an appropriate end use. The tires will be stockpiled in a designated area until disposal or transfer is accomplished. Small quantities of tires, defined as less than 10 tires per lift, can be disposed of with the MSW. If more than 10 tires are present, they will be disposed of with the C & D material, be disposed of in a separate trench, or be buried in the MSW trench in a single layer and covered with an equal thickness of soil. During wet weather conditions, the tire stockpiles will be temporarily covered with a tarp to prevent water from accumulating inside the tires in order to minimize conditions capable of harboring breeding mosquitos.

Liquid Wastes

Liquid wastes will not be accepted at the Tonopah Landfill . Any hauler attempting to dispose of liquid wastes will be informed that liquid wastes are not accepted. Liquid wastes are defined as wastes determined to contain free-liquid as defined in NAC 444.692, subsection 4. Information will be available at the site describing acceptable disposal locations and/or practices for liquid wastes.

Used Oil

Nye County may elect to accept used oil at the Tonopah Landfill in the future. The site attendant will manage the designated used oil collection area. Acceptable used oil must be free of solvents and other contaminants. The attendant will be present to inspect, test, and receive the used oil. An authorized hauler will remove the accumulated used oil for the county on a regular basis.

Contaminated Soil

Contaminated soil will not be accepted at the Tonopah Landfill site. Any hauler attempting to dispose of contaminated soil will be informed that contaminated soil is not accepted at the site. Information will be available at the site describing acceptable disposal locations and/or practices for contaminated soil.

White Goods and Bulky Items

White goods and bulky items (e.g., large appliances, furniture, and mattresses) will be accepted at the site and will be disposed of in the C & D disposal area.

Refrigerators

Refrigerators with Freon and other Freon-containing devices will not be accepted at the Tonopah Landfill . If a refrigerator or other device has been certified for the appropriate removal of Freon, it may be disposed with other white goods.

Dead Animals

Dead animal carcasses will be accepted at the Tonopah Landfill . A separate dead animal pit will be maintained at the site at all times. The attendant will bury the animals immediately to prevent transmission of disease.

Medical Wastes

Medical wastes will be incinerated at the Tonopah Hospital and the resulting ash will be disposed of with the municipal solid waste. In the event that the hospital incinerator is no longer operating, the red bag wastes will be disposed of in a small pit at the bottom of the MSW trench and covered immediately with a minimum of 36 inches of soil. Medical wastes in any other form will not be accepted at the landfill.

Septage and Sludge

Septage and sludge will not be accepted at the landfill site. Any hauler attempting to dispose of septage and sludge waste will be informed that it is not accepted at the facility. Information will be available at the site describing acceptable disposal locations and/or practices for septage and sludge waste.



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Asbestos

Asbestos-containing waste is considered to be a hazardous waste when friable, finely divided, or powdered. Friable means that the material can be reduced to a powder or dust under hand pressure when dry. Non-friable asbestos-containing waste will be accepted for disposal. Non-friable asbestos-containing wastes will be disposed of in a separate trench as required by NAC 444.976. The site attendant will inspect all asbestos-containing waste prior to disposal and will cover the waste with at least 6 inches of soil within 24 hours after disposal.

Friable asbestos-containing waste will be accepted at the Tonopah Landfill if properly bagged. The bags will be disposed of in the asbestos trench and covered with 6 inches of soil within 24 hours after disposal. Information will be available at the site describing acceptable practices for friable asbestos-containing waste.

Ash Bin

A separate ash bin will be provided to handle hot loads (burn barrels) and ashes. Once the hot loads have cooled, the site attendant will dispose of the ash bin contents in the MSW trench.

Environmental Controls

Surface Water Run-on/Run-off Control

The design shown on the engineering drawings in Appendix A provides control measures for surface water run-on around the perimeter of the site and run-off from the site. The perimeter drainage system is capable of handling peak flows from the 25-year, 24-hour storm event. The storm water run-on control structures will consist of permanent diversion channels, culverts, and outfall structures which will intercept storm water flow from above the landfill site and route the flow around the active disposal areas.

Leachate Management

Leachate generation is not expected to occur in measurable quantities at the Tonopah Landfill due to the low regional precipitation, the low average soil moisture content, and the estimated groundwater depth of approximately 200 feet. The site attendant will frequently inspect the landfill visually for signs of leachate accumulation in the disposal area. In addition, to further prevent the possibility of leachate generation during the winter season, accumulated snow will be removed from the surface of landfill areas prior to disposal of wastes and placement of daily cover.

Landfill Gas Monitoring

Monitoring Approach

Due to arid conditions at the site it may take several years for measurable quantities of methane gas to be generated within the landfill. Therefore, a phased approach to landfill gas monitoring is. This approach will include in-waste monitoring to detect methane generation and, after detection of methane, implementation of perimeter monitoring.

In-Trench Monitoring

Methane gas generation will be monitored within a completed solid waste disposal area. This will be accomplished by driving a steel bar into the refuse to a depth of approximately 8 feet. The bar will be retracted and a monitoring probe will be placed in the opening and sealed.

Perimeter Monitoring

If the presence of methane gas generation is established, permanent gas monitoring wells will be installed by Nye County around the perimeter of the site. The gas monitoring wells will be made from perforated 1-inch steel or PVC pipes. The monitoring wells will be capped at the bottom and installed in borings to a depth equal



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to refuse in the area adjacent to the well. The borehole annulus will be filled with gravel and the well will be extended above the ground surface. Gas flow inside the wells will be controlled by mounting a ball valve at the top of the well pipe.

Landfill gas monitoring will be conducted on a quarterly basis in accordance with NAC 444.667. A log book of landfill gas monitoring inspections will be kept in the gate house at all times.

Gate House Monitoring

A battery-powered methane gas detection device will be placed in the gate house to warn the attendant of methane gas accumulation. The device will be inspected and batteries checked monthly for proper operation.

Control Measures

In the event that levels of methane gas are detected above the lower explosive limit at the landfill site boundary, Nye County will install a landfill gas control system in accordance with NAC 444.667. The system will remain in operation until the landfill gas levels fall below the lower explosive limit at the landfill site boundary.

Litter

A litter fence will be placed around the working face of the active landfill area(s) to reduce the spread of litter. In addition, the facility will be inspected each operating day by the site attendant for litter. Litter control in the surrounding area will be conducted by the site attendant at least semi-weekly and all scattered light debris will be returned to the fill area and covered by the site attendant.

Dust Control

Dust will be controlled on-site by providing adequate road surfaces for anticipated traffic. The surfaces will likely be gravel or other suitable material which minimizes dust.

Program For Post-Closure

Final Cover Maintenance Program

Periodic site inspections will be made to assess the integrity and effectiveness of the final cover. These inspections will be conducted on a quarterly basis during the initial year following completion of closure activities, and thereafter, on a yearly basis. Additional fertilizer and mulch will be applied to the surface of the final cover for the first few years following closure. Areas of the cover where plant growth has not been established will be reseeded, as necessary. Visual inspection of the covered landfill will be made and compared to the topographic survey of the final cover (as recommended in the PART 4 - CLOSURE PLAN) to determine the extent of refuse settlement. Any significant landfill settlement, subsidence, or erosion effects which will affect the integrity of the final cover will be corrected as necessary.

Surface Water Drainage Program

The landfill perimeter drainage ditches, the surface drainage measures incorporated into the final cover, and the run-off control basins will remain at the site and will be inspected and maintained as part of the postclosure activities. The location and design of these drainage control measures are illustrated in the engineering drawings included in Appendix A. Any accumulated debris in the ditches or basins will be removed to ensure unrestricted surface water flow and drainage during the post-closure period.

Landfill Gas Monitoring Program

The methane gas monitoring system that is ultimately implemented for the Tonopah Landfill will be maintained and remain operational during the post-closure period. A landfill gas monitoring program will be developed based on the methane gas concentrations detected in the perimeter probes during the active life of



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the landfill, and as applicable, during the site closure activities.

Post-Closure Land Use

The post-closure land use for the site is planned as non-irrigated open space. To date, no new structures are anticipated to be constructed on the site after closure. If new structures are to be constructed on the site or within 1,000 feet of the site boundaries, the applicable regulatory requirements for environmental monitoring and safety will be followed.

Certificate of Post-Closure

Upon completion of the program for post-closure monitoring, an independent professional engineer, in conjunction with the solid waste management authority, will verify that the program has been completed in accordance with the approved post-closure plan. A certificate of post-closure will be placed in the operating record of the landfill.

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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Phone: (775) 687-9477; fax: (775) 687-5856; e-mail: PEckert@ndep.nv.gov; or
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