

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION FACT SHEET

(pursuant to NAC 445A.236)

Permittee Name: Carver's Smoky Valley RV & Mobile Home Park
HC 60 Box 53708
Round Mountain, NV 89045

Permit Number: **NEV20018 – Renewal**

Location: Carver's Smoky Valley RV & Mobile Home Park
S.R. 376, 8 miles NW of Round Mountain, Nye County
Latitude: 38° 47' 16"N, Longitude: 117° 10' 36"W
Township 11N, Range 43E, Section 29

General:

The Division first issued discharge permit **NEV20018** to C&H Mobile Home Park on August 9, 1984. The permit was kept active by C&H until its expiration on March 15, 2001. On August 1, 2001, the Division received notification that the wastewater treatment facility (WWTF) was still active but had been sold to Carver's Smoky Valley RV & Mobile Home Park. The new owner submitted an application for a discharge permit on April 19, 2002 and followed-up this submission with a revised flow limit request on August 1, 2002.

The property is located on S.R. 376, approximately eight miles northwest of Round Mountain in Nye County. The property consists of 120 mobile home and RV spaces, with generally full occupancy. Division records indicate that the WWTF was constructed around 1982. The former owner never submitted an approved Operations and Maintenance (O&M) Manual to the Division, so information for this fact sheet is based on data from the Division's Technical Services files. Since the design treatment capacity of this system exceeds 10,000 gallons per day (gpd), the owner is required to secure the services of a Grade I Certified Operator to supervise the WWTF operations and sign the Discharge Monitoring Reports (DMRs).

Domestic (sanitary) wastewater flows to the WWTF via gravity. The original design engineer modified a below-grade septic tank to provide secondary-treatment (biological) of the wastewater influent. The modified septic tank consists of three baffled compartments to provide primary settling, aeration, and secondary clarification. Six submerged aerators are used in the second compartment, each rated at 1/3 Hp. The interior dimensions of this modified septic tank are 18' (W) x 40' (L) x 7' (liquid depth). At design capacity, the tank provides approximately one day's detention period. These compartments are to be inspected quarterly and pumped by a septage hauler when the sludge depth reaches 24 inches in any compartment.

The septic tank effluent discharges to a 500-gallon chlorine contact tank for disinfection. Solid calcium hypochlorite tablets are used to maintain a chlorine residual of at least 0.1 ppm (in practice, the former operator typically measured 0.3 ppm). It is the Division's present understanding that an outlet weir is staffed to provide an instantaneous flow reading. Because this instantaneous flow

reading does not reflect the daily wastewater flow demand, permit flow limits are based on estimates based on domestic sewage flow standards from the Uniform Plumbing Code. Chlorinated effluent is discharged to one of two unlined ponds for further polishing and disposal via evaporation and percolation. Each pond is approximately 0.6 acres in area.

Receiving Water Characteristics:

Effluent is discharged to the groundwater via percolation in ponds 1 & 2. The stated depth to groundwater is 10 feet below ground surface (bgs) and the topographic quad map for this site indicates nearby springs and flowing (artesian) wells. Division files indicate that the modified septic tank was outfitted with a dewatering well to remove shallow groundwater in the vicinity of the tank excavation to prevent "floating".

Two groundwater monitoring wells have been installed on this property. One well (MW-1) provides a background (upgradient) sample, while the other well (MW-2) provides the downgradient sample. The required quarterly groundwater sampling indicates the following groundwater quality during the period from February 2004 through February 2007:

Parameter		Average	Maximum	Minimum
MW-1	Total Dissolved Solids (mg/l)	295	420	220
	Chlorides (mg/l)	36	100	12
	Total Nitrogen (mg/l)	2.3	9.4	0.4
	Nitrate as N (mg/l)	0.9	8.9	0.03
MW-2	Total Dissolved Solids (mg/l)	398	670	210
	Chlorides (mg/l)	38	86	4.7
	Total Nitrogen (mg/l)	1.1	2.1	0.5
	Nitrate as N (mg/l)	0.23	0.7	<0.05

The data does not indicate any significant impact to groundwater quality.

Effluent Flow and Characteristics:

The Division has approved the design treatment capacity of this WWTF at 0.0345 MGD (34,500 gpd). The monitoring data submitted during the period from February 2004 through February 2007 report the following:

Parameter		Average	Maximum	Minimum
Influent	BOD5 (mg/l)	166	630	56
	TSS (mg/l)	112	360	20
Effluent	Flow (gpd)	14,400	14,400	14,400
	BOD5 (mg/l)	54	190	21
	TSS (mg/l)	41	97	16
	pH (St. Units)	7.2	7.2	7.2
	Residual Chlorine (mg/l)	<0.5	<0.5	<0.5

The owners of the facility experienced difficulty in meeting permit limits early on, due to inexperience in operation. The facility has generally been in compliance since February 2005.

Proposed Effluent Limitations and Special Conditions:

The Division proposed the following permit limitations and monitoring requirements:

Table 1: Plant Discharge Limitations

PARAMETER		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Influent	BOD ₅ , mg/L	Monitor & Report		Continuous	Totalizing Flow Meter
	(TSS), mg/L	Monitor & Report		Quarterly	Discrete
Effluent	Flow (gallons per day)	34,500	---	Monthly	Discrete
	BOD ₅ , mg/L	30	45	Quarterly	Discrete
	TSS, mg/L	90		Quarterly	Discrete
	pH, Std. Units	Between 6.0 & 9.0		Quarterly	Discrete
	Chlorine Residual, mg/L	≥ 0.1		Quarterly	Discrete
Septic Tank Sludge Depth Compartments 1 - 3, (inches of sludge)		Monitor & Report ¹		Quarterly	Tank Observation & Measurement
Operation Time, Aerators 1 - 6, Minutes		Monitor & Report		Monthly	Discrete
Number of Chlorination Tablets Used		Monitor & Report		Weekly	Discrete
Number and Type of Active Connections		Monitor & Report		Monthly	Observation
Pond Depth - Feet		Monitor & Report		Monthly	Staff Gage
Operator's Dated Log (Photocopies of appropriate pages)		Monitor & Report		Monthly	Photocopies

TSS = Total Suspended Solids

1. Sludge removal required when sludge depth in any compartment ≥ 24 inches

Table 2: Groundwater Monitoring (MW-1 & MW-2)

PARAMETER	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS	
		Measurement Frequency	Sample Type
TDS, mg/L	Monitor & Report	Quarterly	Discrete
Chlorides, mg/L	Monitor & Report	Quarterly	Discrete
Nitrate as N, mg/L	Monitor & Report	Quarterly	Discrete
Total Nitrogen as N, mg/L	10.0 ²	Quarterly	Discrete
Depth to Groundwater, ft	Monitor & Report	Quarterly	Field Measurement
Groundwater Elevation, ft AMSL	Monitor & Report	Quarterly	Field Measurement

1. Groundwater samples shall be taken only after purging at least three (3) well volumes of groundwater from each monitoring well.
2. See Part I.A.15 for groundwater nitrogen limits.

Schedule of Compliance:

The Permittee shall submit the following items to the Division for review and approval (all compliance deliverables shall be addressed to the attention of the Compliance Coordinator, Bureau of Water Pollution Control):

- a. **By February 15th, 2009**, the Permittee shall submit a letter designating a State of Nevada Certified Class I (or higher) Wastewater Treatment Operator, who will be responsible for supervising treatment plant operations and signing the quarterly DMRs. A current copy of the operator's certification shall be included with this designation.
- b. **By February 15th, 2009**, the Permittee shall submit an Operations and Maintenance (O&M) Manual prepared in accordance with the Division's WTS-2 guidance: *Minimum Information Required for an Operations and Maintenance Manual*.
- c. **By February 15th, 2009**, the Permittee shall have the depth of sludge in each septic tank compartment measured and reported by a State of Nevada certified septage tank service.
- d. **By February 15th, 2009**, the Permittee shall submit photographic documentation of repair of fencing around the facility ponds and installation of appropriate signage.

Rationale for Permit Requirements:

The Division's rationale for the proposed monitoring conditions is as follows:

- **Flow:** Flow is to be metered and totalized to ensure that the design capacity of the treatment facility is not exceeded. The Division is requiring that the Permittee report the number and type of active connections as well as the flow on a monthly basis so that the reported flow can be compared to the number of connections.
- **BOD₅:** The Division requires the monitoring of influent and effluent Biochemical Oxygen Demand (5-day), as an indication of treatment performance in the WWTF. The Division's secondary-treatment BOD₅ standards for this plant are 30 and 45 mg/L, respectively, for the 30-day average and daily maximum values. This parameter is to be monitored and reported on a quarterly basis. Since the disposal ponds provide some degree of effluent polishing, BOD₅ effluent samples should be obtained from the final disposal pond.
- **TSS:** The Division's secondary-treatment standard for Total Suspended Solids (TSS) in the pond effluent is 90 mg/L. This parameter is currently monitored in the tank influent and final pond effluent on a quarterly basis.
- **pH:** The Division requires the pond effluent to meet a pH standard of between 6.0 and 9.0 standard units, consistent with other regulated groundwater dischargers in Nevada. This parameter is to be sampled in the pond effluent on a quarterly basis, and must be measured by a certified laboratory.

- **Chlorine Residual:** The chlorine shall be tested on a quarterly basis and is to maintain minimum free chlorine of 0.1 ppm. The chlorine residual sample shall be obtained from the outlet of the chlorine contact tank. The free chlorine shall be maintained at the level of at least 0.1 mg/l to minimize pathogens that may be harmful to human health. Because of the remote location of the facility, the free chlorine may be measured onsite using appropriate test methods.
- **Groundwater Monitoring:** The Division requires quarterly groundwater sampling in MW-1 and MW-2 for depth to groundwater, groundwater elevation, total dissolved solids (TDS), chlorides, nitrate as nitrogen, and total nitrogen parameters to ensure that State groundwater resources are not impacted from effluent percolation in disposal ponds #1-2.

Proposed Determination:

The Division has made the tentative determination to issue the proposed permit, under the provisions prescribed, for a 5-year period. Under NAC 445A.232, this permit is classified as a Septic System Individual Permit.

Procedures for Public Comment:

The Notice of the Division's intent to issue a groundwater discharge permit to the applicant, subject to the conditions contained within the permit is being sent to the **Tonopah Times-Bonanza** and the **Reno Gazette Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **December 19th, 2008 by 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Alexi Lanza - Staff Engineer
Bureau of Water Pollution Control