



FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: TOWN OF ROUND MOUNTAIN
P.O. BOX 1369
ROUND MOUNTAIN, NV - 89045

Permit Number: NS0087032

Location: HADLEY WASTEWATER TREATMENT FACILITY, NYE
1100 BIG CREEK ROAD, ROUND MOUNTAIN, NV - 89045
LATITUDE: 38.702222, LONGITUDE: -117.154167
TOWNSHIP: 10 N, RANGE: 43 E, SECTION: 28

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	INFLUENT	Influent Structure		ROUND MOUNTAIN	NV	89045	NYE	38.702222	-117.154167	GROUNDWATER
002	EFFLUENT	External Outfall		ROUND MOUNTAIN	NV	89045	NYE	38.702222	-117.154167	GROUNDWATER
003	MONITORING WELL - MW-4	Monitoring Well		ROUND MOUNTAIN	NV	89045	NYE	38.704222	-117.152356	GROUNDWATER
004	MONITORING WELL - MW-5	Monitoring Well		ROUND MOUNTAIN	NV	89045	NYE	38.703964	-117.151342	GROUNDWATER
005	MONITORING WELL - MW-6	Monitoring Well		ROUND MOUNTAIN	NV	89045	NYE	38.702122	-117.156425	GROUNDWATER
006	POND SLUDGE	External Outfall		ROUND MOUNTAIN	NV	89045	NYE	38.702222	-117.154167	GROUNDWATER

General:

Round Mountain's pond treatment facility was constructed in 1989 to service approximately 830 residents and businesses in the Hadley Subdivision in Round Mountain in northern Nye County. The primary employment in Round Mountain is the gold mine located across the road from the subdivision. At the Hadley wastewater treatment facility (WWTF), three lined treatment ponds discharge secondary-treated effluent into one 15 acre-foot unlined effluent storage reservoir, which then discharges effluent twice-annually into three rapid infiltration basins (RIBs). The treatment facility has a capacity of 160,000 gallons per day.

Discharge Characteristics:

The discharge from the WWTF is secondary-treated effluent. The effluent is pumped to the RIBs, which distribute the effluent into the groundwater of the State. The treated effluent meets State and Federal standards for secondary treatment. Round Mountain and NDEP entered into an Administrative Order on Consent on June 5, 2015, that implements a Nitrogen Reduction Plan to address elevated groundwater nitrate levels resulting from the operation of the pond wastewater treatment system. The steps to completing the Nitrogen Reduction Plan are listed in the table of compliance items with their respective dates of completion.

The water quality results reported in the DMRs from the 4th quarter 2014 through the 3rd quarter 2015 show the following:

Carbonaceous Biological Oxygen Demand: CBOD values ranged from a low of 25 mg/L to a high of 45 mg/L. This latter value is right at the permit limit of 45 mg/L. Most of the other values during that period ranged between 25 mg/L to 33 mg/L.

Total Suspended Solids: TSS ranged between 42 mg/L to 120 mg/L. Two months during that period exceeded the permit limit of 90 mg/L. The operator stated that aeration was inconsistent due to electrical problems.

pH: pH values were all within the permitted limits of 6.0 to 9.0 standard units.

Total Nitrogen: TN values, which are only taken once per quarter for the treated effluent, ranged from 18 mg/L to 61 mg/L. The TN values in the down-gradient monitoring wells are in the range of 11 - 12 mg/L, which exceed the permit limit of 10 mg/L. These elevated values are the cause of the groundwater degradation.

Receiving Water:

The receiving waters are groundwaters of the State. Currently, an up-gradient supply well, HWWT-3, for the Hadley subdivision is located one mile west of the WWTF. This well provides a background total nitrogen level that was below detection limit with a groundwater depth of 109 ft below ground surface (bgs). The current down-gradient monitoring well, HWWT-4, was installed in 2005, is located 250-ft north of RIB #3 and the depth to groundwater is approximately 85 feet bgs. Water quality results from this well indicate that the total nitrogen (TN) level in HWWT-4 is 12.2 mg/L with a peak value of 16 mg/L since the well's installation. This TN level exceeds the State standard of 10 mg/L. Presumed groundwater flow gradient is NNW away from the RIBs.

Three new monitoring wells - one up-gradient and two down-gradient - were installed in February 2016. Sampling results from these wells will determine whether TN values have dropped below 10 mg/L. If TN continue to exceed permit limits, then the Permittee will undertake additional measures to prevent further groundwater degradation.

Summary of Changes From Previous Permit:

Sampling requirements remain the same as the previous permit. However, due to the high TN numbers, the Permittee signed an Administrative Order of Consent (AOC) with NDEP which requires the Permittee to initiate the relining of treatment ponds #1-3 and storage pond #4 by May 23, 2016, and complete the relining and the installation of three new monitoring wells to monitor the TN levels in the groundwater by September 30, 2016. If the groundwater TN level in the new down-gradient monitoring wells does not decrease below 10 mg/L by mid-2017, the Permittee shall implement an effluent reuse system (ERS) and/or lined evaporation pond by the end of 2017. The ERS, consisting of either constructed wetlands, irrigated golf course landscape or forage crop propagation fields, shall be constructed and operated in a manner which reduces the nitrogen loading into the environment through agronomic (plant) nutrient uptake of nitrogen species.

Round Mountain will be required to sample the sludge depths in the treatment pond during the 3rd quarter of each year of this permit. When the sludge depths average 20-percent of the total depth of the pond, Round Mountain shall submit a plan to NDEP that outlines the schedule to remove the sludge within two

years.

Round Mountain will have one year from the issuance of this permit to sign up to submit quarterly DMRs electronically using Net-DMR. The Bureau of Water Pollution Control's (BWPC) Nevada-NetDMR system is a web-based site that allows electronic submission of DMRs. Nevada-NetDMR enables a Permittee the ability to enter and electronically submit DMR data. By using Nevada-NetDMR, Permittees will save time, see a reduction in its paperwork burden, and data will automatically error-check and validate the information prior to submission. The system also allows electronic submittal of attachments and supplemental documentation and provides instant confirmation of submission.

In order to make all groundwater discharge permits consistent, NDEP has renumbered this permit, which is now NS0089032. This new permit number does not change the type or conditions of the permit.

Proposed Effluent Limitations:

The Permittee is authorized to discharge in accordance with the limitations, requirements and conditions of this permit. The discharge shall be limited, sampled and monitored by the Permittee as specified below:

WWTP Discharge Limitations Table for Sample Location 001 (Influent Structure) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	30 Day Average	<= 0.16 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	CALCTD ^[1]

Notes (WWTP Discharge Limitations Table):

1. Lift Station calculation.

WWTP Discharge Limitations Table for Sample Location 001 (Influent Structure) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Solids, total suspended	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Quarterly	DISCRT
BOD, carbonaceous, 05 day, 20 C	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Quarterly	DISCRT

WWTP Discharge Limitations Table for Sample Location 002 (External Outfall) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
pH, maximum	Monthly Maximum		<= 9 Standard Units (SU)	Effluent Gross	002	Monthly	DISCRT
Solids, total suspended	Monthly Maximum		<= 90 Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT
BOD, carbonaceous, 05 day, 20 C	Monthly Maximum		<= 45 Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT

WWTP Discharge Limitations Table for Sample Location 002 (External Outfall) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT

Groundwater Monitoring Wells Table for Sample Location 003 (Down-Gradient Monitoring Well Mw-4) To Be Reported Quarterly^[1]

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	Quarterly Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	003	Quarterly	VISUAL ^[2]

Notes (Groundwater Monitoring Wells Table):

1. A groundwater sample shall be taken after purging at least three (3) well volumes of groundwater from the monitoring well.
2. Field measurement.

Groundwater Monitoring Wells Table for Sample Location 004 (Down-Gradient Monitoring Well Mw-5) To Be Reported Quarterly^[1]

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	Quarterly Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	004	Quarterly	VISUAL ^[2]

Notes (Groundwater Monitoring Wells Table):

1. A groundwater sample shall be taken after purging at least three (3) well volumes of groundwater from the monitoring well.
2. Field measurement

Groundwater Monitoring Wells Table for Sample Location 005 (Up-Gradient Monitoring Well Mw-6) To Be Reported Quarterly^[1]

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	Quarterly Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	005	Quarterly	VISUAL ^[2]

Notes (Groundwater Monitoring Wells Table):

1. A groundwater sample shall be taken after purging at least three (3) well volumes of groundwater from the monitoring well.
2. Field measurement

Ponds / Rapid Infiltration Basins for Sample Location 006 (Pond Sludge) To Be Reported Annually^{[1][2]}

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Sludge/Solids, depth ^[3]	Maximum Value	M&R Feet (ft)		See Footnote ^[4]	006	Annual ^[5]	VISUAL

Notes (Ponds / Rapid Infiltration Basins):

1. The Permittee shall use a method approved by NDEP to determine the sludge depth in its ponds. The plan for monitoring the sludge depths shall be submitted with O&M Manual.
2. When sludge depths average 20-percent of the total depth of the pond(s), the Permittee shall submit to NDEP a plan to remove the sludge within two years.
3. The Permittee shall report the total depth of the pond and the depth of sludge.
4. The Permittee shall test the sludge depths at various spots in the pond that have been approved by NDEP.
5. The Permittee shall sample the sludge depths during the 3rd quarter.

Rationale for Permit Requirements:

Monitoring is required to ensure that groundwaters of the State of Nevada are not degraded. Monitoring is also required to assess the level of treatment being provided, and to determine compliance with discharge permit limits. The Permittee is in substantial compliance with its permit.

Special Conditions:

Due to the high TN numbers, the Permittee signed an Administrative Order of Consent (AOC) with NDEP on June 5, 2015, which requires the Permittee to initiate the relining of treatment ponds #1-3 and storage pond #4 by May 23, 2016, and complete the relining and the installation of three new monitoring wells to monitor the TN levels in the groundwater by September 30, 2016. If the groundwater TN level in the new down-gradient monitoring wells does not decrease below 10 mg/L by mid-2017, the Permittee shall implement an effluent reuse system (ERS) and/or lined evaporation pond by the end of 2017. The ERS, consisting of either constructed wetlands, irrigated golf course landscape or forage crop propagation fields, shall be constructed and operated in a manner which reduces the nitrogen loading into the environment through agronomic (plant) nutrient uptake of nitrogen species.

SA – Special Approvals / Conditions Table

There are no Special Approval / Condition items

Flow:

The design capacity of this system is rated at 0.16 MGD. Presently, flow is approximately 70-percent of capacity.

Corrective Action Sites:

There are no Bureau of Corrective Actions' sites within a one-mile radius of the WWTP.

Wellhead Protection Program:

The WWTF is located within the 6,000 ft, Drinking Water Protection Area (DWPA) 4, of three non-transient non-community supply wells owned and operated by the Smoky Valley Mine. Also located nearby are two public (municipal) supply wells owned and operated by the Town of Round Mountain. The WWTF is located within the 3,000 and 6,000 ft, DWPA 3 & 4, respectively, for these two municipal supply wells. For each of the five supply wells, the individual wellhead capture zone have not been delineated or modeled.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall complete construction of the Pond Relining Project.	9/30/2016
2	The Permittee shall operate the Pond Relining Project and provide quarterly effluent and groundwater monitoring data in accordance with this Permit's DMR submission schedule.	6/30/2017
3	The Permittee shall inform NDEP whether the groundwater total nitrogen (TN) level in all down-gradient monitoring wells has decreased below the permitted limit of 10 mg/L.	6/30/2017
4	If the TN levels exceed the permitted level of 10 mg/L in the down-gradient monitoring wells as of June 30, 2017, the Permittee shall provide NDEP with final (100%) design plans and specifications for an Effluent Reuse System (ERS) and/or lined evaporation pond. The ERS shall consist of either constructed wetlands, irrigated golf course landscape or forage crop propagation fields. The ERS shall be constructed and operated in a manner which reduces the total nitrogen loading into the environment through agronomic (plant) nutrient uptake of nitrogen species.	12/31/2017
5	If the TN levels in all of the down-gradient monitoring wells drop below 10 mg/L by June 30, 2017, the Permittee shall not be required to implement the ERS.	6/30/2017
6	If the TN levels exceed the permitted level of 10 mg/L in the down-gradient monitoring wells as of June 30, 2017, the Permittee shall initiate construction of the ERS and/or lined evaporation pond.	5/30/2018
7	The Permittee shall complete construction of the ERS and/or lined evaporation pond.	10/30/2018
8	The Permittee shall submit two copies of an updated Operations and Maintenance (O&M) Manual to NDEP for review. The manual shall be prepared in accordance with the Division's WTS-2 guidance document: <i>Minimum Information Required for an Operations and Maintenance Manual</i> . If no revisions are needed, the Permittee shall submit a letter stating that the O&M Manual has no revisions.	9/1/2016
9	All Discharge Monitoring Reports (DMRs) shall be submitted electronically through the Nevada NetDMR website: https://netdmr.ndep.nv.gov/netdmr/public/home.htm .	7/1/2017

Deliverable Schedule:

DLV– Deliverable Schedule for Reports, Plans, and Other Submittals

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	10/28/2016
2	Annual Report	Annually	1/28/2017

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to groundwater of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Tonopah Times-Bonanza & Goldfield News 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 until 5:00 P.M. **4/30/2016**, a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX 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 determined to be appropriate. All public hearings must be conducted to accordance with NAC 445A.238.

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

Proposed Determination:

The Division has made the tentative determination to issue / re-issue the proposed 5-year permit.

Prepared by: **Steve McGoff**

Date: **4/8/2013**

Title: **Staff Engineer III**