



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

FACTSHEET (pursuant to NAC 445A.236)

Permittee Name: RODEO CREEK GOLD INC.
PO BOX 2610
WINNEMUCCA, NV - 894462610

Permit Number: NV0024171

Location: HOLLISTER MINE, ELKO
ELKO COUNTY ROAD 18, --, NV - 00000
LATITUDE: 41.107889, LONGITUDE: -116.561019
TOWNSHIP: 37N, RANGE: 48E, SECTION: 4, 5, 8, 9, 16, AND 17

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	NORTH ANTELOPE CREEK	External Outfall		ELKO	NV	000000000	ELKO	41.110158	-116.554881	ROCK CREEK

General:

Rodeo Creek Gold, Inc. (RCGI) has applied for a new National Pollutant Discharge Elimination System (NPDES) permit, NV0024171, to discharge groundwater captured from vertical, horizontal and/or angled boreholes located within the vicinity of the underground workings of the Hollister underground project located in Elko County, Nevada. Currently treated mine water is conveyed by pipeline to Rapid Infiltration Basins (RIBs) for infiltration into local alluvium in a down gradient location approximately 4.5 miles south of the mine. This operation is permitted under Bureau of Mining Regulation and Reclamation's (BMRR) Water Pollution Control Permit (WPCP) NEV2003114. RCGI is anticipating an increase in dewatering requirements from 694 gallons per minute (gpm) to 1,100 gpm to facilitate water disposal for future mining operations. The infiltration characteristics of the RIBs do not support the increase in discharge at the requested volume/rates. RCGI proposes to put in place a system of collection wells to capture a portion of the clean groundwater and, keeping it isolated from mining activity contamination, pump it via pipeline to North Antelope Creek for discharge.

Discharge Characteristics:

The quality of water to be discharged to North Antelope Creek is anticipated to meet the Nevada Division of Environmental Protection (NDEP) Water Quality Standards with the exception of arsenic and manganese. Reported average concentrations for these constituents found in representative water samples from underground mine water that will be discharged to North Antelope Creek were 0.033 mg/L and 0.36 mg/L respectively. While arsenic is below the 0.050 mg/L reference value, manganese is slightly above the respective reference value of 0.200 mg/L for manganese. These values are not unexpected for underground water found in mineralized zones.

Captured groundwater from the mine will be discharged into North Antelope Creek, a tributary to Antelope Creek and then Rock Creek. According to the Permittee, the integrity of the stream channel at the proposed discharge point will be protected by a discharge outfall that will occur onto bedrock. The North Antelope Creek stream channel is described as extremely rocky with virtually no soils present.

Receiving Water:

The receiving water for this discharge is North Antelope Creek at Antelope Creek, which then flows into Rock Creek. Beneficial uses of North Antelope Creek at Antelope Creek are listed in Nevada Administrative Code (NAC) 445A.1527. Rock Creek is a tributary to the Humboldt River.

The 2008-10 303(D) Impaired Waters Lists shows Rock Creek (Where Antelope Creek enters) as meeting all of its Water Quality Standards. The Humboldt River from Battle Mountain to Comus is listed as not meeting Standards for fluoride, iron, and turbidity. This reach of the river has existing total maximum daily loads (TMDL) for total phosphorus, Total Dissolved Solids (TDS) and Total Suspended Solids (TSS).

Summary of Changes From Previous Permit:

N/A

Proposed Effluent Limitations:

Discharge Limitations Table for Sample Location 001 (External Outfall) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Solids, total suspended	Daily Maximum		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Lead, total (as Pb)	Daily Maximum		<= 0.197 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Mercury, total (as Hg)	30 Day Average		<= 0.0009 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Flow rate	30 Day Average	<= 1.584 Million Gallons per Day (Mgal/d)		Effluent Gross	001	Continuous	METER
Flow rate	Daily Maximum	<= 1.584 Million Gallons per Day (Mgal/d)		Effluent Gross	001	Continuous	METER
Temperature, water deg. centigrade	Daily Maximum	<= 34 Degrees Centigrade (deg C)		Effluent Gross	001	Monthly	DISCRT
Oxygen, dissolved (DO)	Daily Minimum		>= 5 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
pH, minimum	Daily Minimum		>= 6.5 Standard Units (SU)	Effluent Gross	001	Monthly	DISCRT
pH, maximum	Daily Maximum		<= 9 Standard Units (SU)	Effluent Gross	001	Monthly	DISCRT
Copper, total (as Cu)	30 Day Average		<= 0.017 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Solids, total dissolved	Daily Maximum		<= 500 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Hardness, total (as CaCO3)	Daily Maximum		<= 200 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
			<= 20				

Discharge Limitations Table for Sample Location 001 (External Outfall) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Solids, total suspended	30 Day Average		Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Zinc, total (as Zn)	30 Day Average		<= 0.216 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Zinc, total (as Zn)	Daily Maximum		<= 0.216 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Cadmium, total (as Cd)	30 Day Average		<= 0.0005 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Cadmium, total (as Cd)	Daily Maximum		<= 0.004 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Copper, total (as Cu)	Daily Maximum		<= 0.027 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Lead, total (as Pb)	30 Day Average		<= 0.008 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT
Mercury, total (as Hg)	Daily Maximum		<= 0.0016 Milligrams per Liter (mg/L)	Effluent Gross	001	Monthly	DISCRT

Discharge Limitations Table for Sample Location 001 (External Outfall) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chloride (as Cl) ^[2]	Daily Maximum ^[3]		<= 860 Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Chloride (as Cl) ^[2]	30 Day Average ^[3]		<= 230 Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Antimony, total (as Sb)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Arsenic, total (as As)	Daily Maximum		<= .05 Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Beryllium, total (as Be)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Chromium, total (as Cr)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Manganese, total (as Mn)	Daily Maximum		<= .2 Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Nickel, total (as Ni)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Nitrogen, total	Daily Maximum	[1]	M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Phosphorus, total (as P)	Daily Maximum		<= .1 Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Selenium, total (as Se)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Silver, total (as Ag)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
			M&R				

Discharge Limitations Table for Sample Location 001 (External Outfall) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Thallium, total (as Tl)	Daily Maximum		Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Cyanide, weak acid, dissociable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT

Notes (Discharge Limitations Table):

1. The water must not contain nutrient concentrations from a source other than a natural source which cause the growth of algae or aquatic plants in amounts that interfere with any beneficial uses of the water.
2. Chloride limits are set at ≤ 230 mg/l (acute aquatic life standard), and ≤ 860 mg/l (chronic aquatic life standard) cited in NAC 445A.1527. The acute standard is a 1-hour average test, and the chronic standard is a 96-hour average test. For the purpose of this permit the acute standard shall be reported as the daily max and the chronic standard shall be reported as the 30 day average.
3. One-hour and 96-hour average concentration limits may be exceeded only once every 3 years.

Rationale for Permit Requirements:

The Division has established the monitoring requirements above to ensure that water quality is not degraded as a result of the dewatering activities.

Flow: The rationale for the daily maximum and 30-day average discharge rate is based on the requested flow limit in the application and is explained in the Flow section of this fact sheet.

Dissolved Oxygen: The Dissolved Oxygen limitation is based on NAC 445A.1527, water quality standards for beneficial uses, with aquatic life (warm water fishery) as the most restrictive beneficial use.

Total Dissolved Solids: The TDS limitation, ≤ 500 mg/L, is based on NAC 445A.1522, water quality standards for beneficial uses, with municipal supply as the most restrictive beneficial use.

Hardness: Hardness is not limited in the NAC or by the permit, but is necessary to calculate as several of the parameters listed are a function of hardness. Limitations set in this permit are based on an assumed hardness equal to 200 mg/l.

Total Suspended Solids: The TSS limitation, 30 mg/L (30 day average) and 20 mg/L (daily maximum), is based on 40 CFR Part 440 Subpart J, in part "any existing point source subject to this subpart must achieve this effluent limitation for mine drainage from mines operated to obtain copper, lead, zinc, gold, or silver bearing ores".

Cadmium, Copper, Lead, Mercury, and Zinc: 30 day averages and daily maximums are based on Nevada Water Quality Standards at NAC 445A.1236 Standards for toxic materials applicable to designated waters. Limits are calculated as Totals in mg/L using an average receiving water hardness of 200 mg/L.

Arsenic, total: The total arsenic limitation, 50 μ g/L, is based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.1236 with municipal/domestic supply as the most restrictive beneficial use..

Manganese, total: The total manganese limitation, 200 μ g/L, is based on the Standards for Toxic Materials Applicable to Designated Waters, NAC 445A.1236, irrigation as the most restrictive beneficial use.

Phosphorous: The phosphorous limitation, less than or equal to 0.1 mg/L is based on NAC 445A.1527 water quality standards for beneficial uses, with aquatic and contact being the most restrictive beneficial use.

Chloride: The Chloride limitation of less than or equal to 230 mg/L for the acute standard and less than or equal to 860 mg/L for the chronic standard is based on NAC 445A. 1527 water quality standards for beneficial uses, with aquatic being the most restrictive beneficial use.

WET Testing:

WET testing is a standard condition for major NPDES permits and is included verify the cumulative effects of the discharge on aquatic life.

Special Conditions:

SA – Special Approvals / Conditions Table

Item #	Description
1	The Permittee shall notify the Division in writing within 14 days of initiating discharge.

Flow:

The total maximum daily isolated groundwater discharge from the underground mine will be permitted at 1.584 million gallons per day (MGD) (1100 gpm). The 30-day average discharge will be 1.584 MGD. The flow rates are based on anticipated dewatering rates described above.

Corrective Action Sites:

There are no Bureau of Corrective Actions (BCA) remediation sites within a one-mile radius of the facility.

Wellhead Protection Program:

The facility is not located within an established wellhead capture zone.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	Prior to the start of discharge, or within 365 days of permit issuance, whichever comes first, the Permittee shall submit to the Division for review and approval 2 copies of an Operations & Maintenance Manual (O&M). The O&M shall include a Discharge Plan providing discharge details including routing, methodology and BMPs to be utilized. The O&M shall also include a Sampling and Analysis Plan summarizing the monitoring, sampling, analytical, and data reporting procedures for the proposed sampling location. Before implementing changes to an approved O&M, the Permittee shall submit the proposed changes to the Division for review and approval.	7/1/2014

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Discharge Monitoring Reports	Quarterly	10/28/2013
2	Annual Report	Annually	1/28/2014
3	Annual WET Test Summary	Annually	1/28/2014

Procedures for Public Comment:

The Notice of the Division's intent to reissue a permit authorizing the facility to discharge to surface waters of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Reno Gazette Journal, Elko Daily Free Press** 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. **6/14/2013** , 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.650.

Proposed Determination:

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

Prepared by: **Michele Reid**

Date: **5/10/2013**

Title: **ES III**