

FACT SHEET
(Pursuant to Nevada Administrative Code [NAC] 445A.401)

Permittee Name: John A. Yeager

Facility Name: Crescent Mill Site

Permit Number: NEV0096104 (2014 Renewal)

A. Location and General Description of Facility

Location: The Crescent Mill Site is located within Section 29, Township 28 South, Range 61 East, Mount Diablo Baseline and Meridian (MDB&M). The mill site is located approximately 15 miles west of the town of Searchlight in southern Clark County, Nevada in the historic Crescent Mining District. The mill is on private land and occupies less than 1 acre.

Site Access: To access the Crescent Mill, proceed on SR-164 approximately 15 miles west of the junction of US Highway-95 and SR-164 and the town of Searchlight. The mill entrance is located on the south side of the highway.

Characteristics: This existing permitted facility utilizes physical separation (i.e. gravity concentration) to extract gold from colluvial material. Throughput is projected to be less than 1,000 tons of ore annually. The facility is designed to be operated and closed without any discharge or release in excess of those standards established by regulation except for meteorological events which exceed the 24-hour, 25-year design storm event.

B. Synopsis

Permitting History:

Water Pollution Control Permit (WPCP) NEV0096104 was first issued to the Permittee in January 1998, for the construction, operation and closure of a physical separation facility. Since the initial issuance of WPCP NEV0096104, the Permit has only been modified once for an Engineering Design Change (EDC) in June 1999 and was last renewed in March 2009.

Mill Operations:

The Crescent Mill was first permitted in 1998 to conduct gravity separation tests on ore material. The Crescent Mill currently remains in a “stand-by” status until a suitable ore can be found, sampled, characterized and authorized for processing. The zero-discharge mill facility is very simple in design and operation. It is comprised of a ball mill, three gravity separation tables, a sand sluice, a clay-lined settling/recycling pond, four freshwater tanks and a recycle water tank.

Colluvial material is fed to a steel hopper (approximate capacity 4.5 tons) and then discharged to a belt feeder which conveys the ore to a ball mill, where the colluvial material is ground and mixed with make-up water. Discharge from the ball mill is passed through a “trash screen” for removal of oversize material and wood fragments. Screen undersize is discharged to a three-way splitter which discharges to three gravity separation tables (6 feet by 16 feet, 5 feet by 12 feet and 5 feet by 12 feet, respectively). Maximum throughput for the tables is approximately 3,300 pounds per hour. The gravity concentrate is collected for further processing while the table tailings are collected and discharged to a sand sluice, approximately 20 feet in length by 10 inches in width. The sluice is a simple box lined with carpet to collect any residual gold values. Discharge from the sluice box enters the settling/recycling pond. Pond decant is pumped back up to the mill for use as make-up water for the ball mill. A Profile I analysis of the sluice discharge is required annually. The settled solids are removed and used as backfill.

Make-up water for the gravity separation operation is obtained from a well located near the mill building. Water is pumped to a large (9,000 gallon) tank and to three 5,000 gallon tanks which provide water to the gravity separation tables.

C. Receiving Water Characteristics

No perennial surface waters exist within a one-mile radius of the Crescent Mill Site. Groundwater depth beneath the site is shallow, approximately 45 feet below ground surface (ft bgs). Water quality is generally good with manganese concentration slightly above the 0.10 mg/L reference value. A Profile I analysis of the water supply well is required annually.

D. Procedures for Public Comment

The Notice of the Division’s intent to issue a permit authorizing the facility to construct, operate and close, subject to the conditions within the permit, is being sent to the **Las Vegas Review-Journal** for publication. The Notice is being mailed to interested persons on the Bureau of Mining Regulation and Reclamation mailing list. Anyone wishing to comment on the proposed permit can do so in writing within a period of 30 days following the date of public notice. The comment period can be extended at the discretion of the Administrator. All written comments received during the comment period will be retained and considered in the final determination.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected intrastate agency, 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.403

through NAC 445A.406.

E. Proposed Determination

The Division has made the tentative determination to issue the permit.

F. Proposed Effluent Limitations, Schedule of Compliance, Special Conditions

See Section I of the permit.

G. Rationale for Permit Requirements

The facility is located in an area where annual evaporation is greater than annual precipitation. Therefore, it must operate under a standard of performance which authorizes no discharge(s) except for those accumulations resulting from a storm event beyond that required by design for containment.

The primary method for identification of escaping process solution will be placed on required routine monitoring of leak detection systems as well as routinely sampling downgradient monitoring well(s) and surface water. Specific monitoring requirements can be found in the Water Pollution Control Permit.

H. Federal Migratory Bird Treaty Act

Under the Federal Migratory Bird Treaty Act, 16 United States Code (USC) 701-718, it is unlawful to kill migratory birds without license or permit, and no permits are issued to take migratory birds using toxic ponds. The Federal list of migratory birds (50 Code of Federal Regulations [CFR] 10, April 15, 1985) includes nearly every bird species found in the State of Nevada. The U.S. Fish and Wildlife Service is authorized to enforce the prevention of migratory bird mortalities at ponds and tailings impoundments. Compliance with State permits may not be adequate to ensure protection of migratory birds for compliance with provisions of Federal statutes to protect wildlife.

Open waters attract migratory waterfowl and other avian species. High mortality rates of birds have resulted from contact with toxic ponds at operations utilizing toxic substances. The Service is aware of two approaches that are available to prevent migratory bird mortality: 1) physical isolation of toxic water bodies through barriers (covering with netting), and 2) chemical detoxification. These approaches may be facilitated by minimizing the extent of the toxic water. Methods which attempt to make uncovered ponds unattractive to wildlife are not always effective. Contact the U.S. Fish and Wildlife Service at 1340 Financial Boulevard, Suite 234, Reno, Nevada 89502-7147, (775) 861-6300, for additional information.

Prepared by: Rob Kuczynski, P.E.
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