

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET (pursuant to NAC 445A.236)

Permittee: Douglas County
P.O. Box 218
Minden, Nevada 89423

Permit: NEV2001502

Location: China Spring Youth Camp
225 China Spring Road
Gardnerville, Douglas County, Nevada

Sec. 18: Part NE4-NE4	Township 11 North	Range 21 East	Mt Diablo Base & Meridian	
FEATURE	LAT (d m s)	LON (d m s)	LAT (decimal °)	LON (decimal °)
Barn / Lift Station	38° 49' 22.52" N	119° 39' 45.22" W	38.8229222°	-119.6625611°
Aeration Ponds	38° 49' 18.67" N	119° 39' 47.50" W	38.8218528°	-119.6631944°
NE Cor Evap/Perc Ponds	38° 49' 17.35" N	119° 39' 43.45" W	38.8214861°	-119.6620694°

Flow: 11,200 gallons per day (0.0112 MGD - Daily Maximum)

General Description: The camp is a non profit juvenile residential treatment center. The facility commenced operation in 1982 and includes dormitories, mess hall, classrooms, administrative building, vocational center, gymnasium, and livestock buildings. The facility is designed to have a capacity of 24 girls and 40 boys resident at the camp with 13 counselors and full time staff for a total of 77 people. There is no sewer service available to this site and the site soils have limited and variable percolation characteristics for subsurface disposal capability.

The applicant operates a treatment system at the camp consisting of:

- Septic tanks for primary treatment, removal of settleable solids and debris.
- Septic tank effluent will be discharged to a lift station that will pump the wastewater to the complete mix aerobic ponds.
- Two 50,000-gallon with 3 feet of freeboard, HDPE lined, aerated complete mix ponds in parallel will provide secondary treatment of the wastewater.
- The complete mix ponds will discharge to an alternating dosing tank with a 298-gallon discharge volume. The dosing tank will provide a sufficient velocity and volume to flush the distribution pipes to the disposal percolation/evaporation ponds.
- The treated wastewater will be discharged to one of four percolation/evaporation ponds, two 0.75-acre and two 0.375-acre ponds. The ponds have been designed to have sufficient volume for winter storage based on a 30-day average discharge rate of 8,500 gallons per day and an adequate surface area for evaporation and percolation.

The evaporation/percolation (evap/perc) ponds lies within a drinking water protection area for the camp potable water well that is located approximately 1,622 feet to the north of the ponds. This eight inch pipe diameter well was constructed to a total depth of 1570 feet below ground surface (bgs) in 2004 and is screened in three zones from 1012 to 1052 feet, 1132 to 1192 feet, and 1340 to 1550 feet. The top of groundwater table is approximately 140 feet below ground surface at an approximate elevation of 5560 feet above mean sea level. The direction of groundwater movement in the vicinity of the potable water well is in a south/southeast direction toward an intermittent stream that bisects the camp. An irrigation well is located approximately 700 feet to the east of the ponds.

Description of Discharge: Effluent discharged from the two aerated, complete mix ponds sent to the four evap/ perc ponds is required to meet secondary treatment standards. Disinfection is not required. The daily maximum flow rate is 0.0112 million gallons per day (MGD). The subsurface leach field pipe network, formerly the only effluent disposal mechanism, remains available for use as backup for selectively scheduled maintenance activities or during unscheduled emergency operation needs. For short periods of time during events of this type, the septic tank primary treatment effluent may be discharged directly to the leach field and monitored for any possible ground surface seepage. The closest distance between the leach field and the facility's potable well is 1,100 feet.

Receiving Water Characteristics: The groundwater in the immediate vicinity of the evaporation ponds is approximately 173 feet bgs and is estimated to flow in a northerly direction. A monitoring well is dilled approximately 150 feet to the northeast of the evap/perc ponds and has a quarterly monitor and report permit requirement with no limits set for: depth to groundwater, groundwater elevation, chlorides and total dissolved solids. A quarterly monitor and report requirement with a 10.0 mg/l limit is set for total nitrogen as N.

The static water level at the potable water well is approximately 145 feet bgs. The groundwater quality at this site has demonstrated the following concentrations, as determined by groundwater samples analyzed in February 2000:

Total dissolved solids	700	mg/L
Nitrate	<0.3 N	mg/L
Chloride	8.6	mg/L
Sulfate	340	mg/L

Proposed Effluent Limitations: Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location(s):

- a. Septic tank effluent, lift station influent;
- b. Dosing tank, effluent;
- c. Collection system (~5 feet below the ponds) monitoring point, effluent;
- d. Perimeter of the percolation/evaporation pond fill;
- e. Toe of the embankment south of the vocational technology building;
- f. Hillside north of the complete mix, aerobic ponds above and below the poultry pens; and
- g. Drainage west of the complete mix, aerobic ponds.

The discharge shall be limited and monitored by the Permittee as specified below:

TABLE I.1 – DISCHARGE LIMITATIONS

<u>PARAMETER</u>	<u>DISCHARGE LIMITATIONS</u>		<u>MONITORING REQUIREMENTS ¹</u>		
	30-Day Average	Daily Maximum	Sample Location	Measurement Frequency	Sample Type
All concentration units are mg/L unless otherwise indicated.					
Flow (MGD)	0.0085	0.0112	a	Continuous	Flow meter
pH (S.U.)	6.0 ≤ pH ≤ 9.0		c	Quarterly	Discrete
BOD₅ - inhibited	30	45	c	Quarterly	Discrete
	Monitor & Report		a, b		
Total Nitrogen as N	Monitor & Report		a, c	Quarterly	Discrete
Total Suspended Solids	Monitor & Report ²		a, c	Quarterly ²	Discrete
Nitrate as N	Monitor & Report ²		c	Quarterly ²	Discrete
Chlorides	Monitor & Report		c	Quarterly	Discrete
Fecal Coliform (cfu or mpn/100 ml)	Monitor & Report		c	Quarterly	Discrete
Seepage (present or absent)	Monitor & Report ²		d, e, f, g	Quarterly ²	Visual, Est.
mg/L: Milligrams per Liter: ppm ml: milliliter M & R: Monitor and Report	BOD ₅ : Biochemical Oxygen Demand [5-day, 20° C] cfu: Colony Forming Unit	mpn: Most Probable Number MGD: Million Gallons per Day S.U.: Standard Units	TDS: Total Dissolved Solids TSS: Total Suspended Solids		

1. See Part I.B. of permit for additional information on sampling, testing, reporting, monitoring and definitions related to requirements.
2. During selectively scheduled maintenance or unscheduled emergency operation events, the septic tank primary treatment effluent sent to the subsurface leach field network shall be sampled/monitored bi-weekly (every two weeks) at location a and reported quarterly. Permittee shall notify the Division of discharge to the leach field within 3 days of such discharge action taking place. At all other times, the parameter is sampled/monitored at the indicated location and reported quarterly. Ground surface seepage is evaluated as present or absent at each location; if present, a visual flow rate estimate is necessary.

GROUNDWATER MONITORING:

Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location(s):

- a. Monitoring well MW-1.

Parameter	Sample Maximum	Frequency	Sample Type
Depth to Groundwater (ft)	Monitor and Report	Quarterly	Field Measurement
Groundwater Elevation (ft)	Monitor and Report	Quarterly	Calculate
Total Nitrogen as N (mg/L)	10.0 mg/l	Quarterly	Discrete
Nitrate as N (mg/L)	Monitor and Report	Quarterly	Discrete
Chlorides (mg/L)	Monitor and Report	Quarterly	Discrete
Total Dissolved Solids (mg/L)	Monitor and Report	Quarterly	Discrete

Rationale For Permit Requirements: Monitoring is required to assess the loading to the treatment plant and the level of secondary treatment being provided, and to determine the impacts of the discharge upon groundwater quality.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the schedule of compliance.

- a. Permittee shall achieve discharge limits compliance upon permit issue.
- b. Within 14 days of identifying ground surface seepage from the percolation/evaporation pods, the Permittee shall notify the Division of the condition.
- c. Within 120 days of observing seepage from the percolation/evaporation ponds, the Permittee shall submit a plan that will address the situation to the Division for review and approval. The plan shall include a schedule for mitigating the leakage and must be stamped and signed by a Professional Engineer licensed in the state of Nevada.
- d. Ninety (90) days prior to increasing the facility's population beyond the seventy-seven (77) person total of youths and staff the camp is designed to accommodate, the Permittee shall submit a permit modification to expand the capacity of the treatment system or a Nevada licensed Professional Engineer stamped evaluation of the treatment system and system flow stating that the system can accommodate the increased population.
- e. Permittee shall notify the Division within 14 days of the facility population being equal to or greater than the design total of 77 for youths and staff combined.
- f. If an interceptor is constructed and becomes available to transport wastewater to a municipal treatment plant, the China Spring Youth Camp shall be connected to the municipal treatment plant interceptor. Thereupon, this permitted facility domestic treatment plant shall be abandoned in a manner approved by and in accordance with a schedule determined by the Division.
- g. Permittee shall notify the Division of any discharge to the complex's subsurface leach field within 3 days of such discharge action taking place.

Special Permit Conditions: Although discharge is authorized to the complex's subsurface leach field, the Permittee shall refrain from utilizing it. The leach field shall only be used for backup disposal.

Proposed Determination: The permit category for this facility in NAC 445A.232 is: DISCHARGE OF DOMESTIC

WASTEWATER...Less than 50,000 gallons daily. The Division has made the tentative determination to issue (renew) the proposed permit, under the provisions prescribed, for a 5-year period.

Procedures for Public Comment: Notice of the Division's intent to issue a permit authorizing the facility to discharge to waters of the State of Nevada, subject to the conditions contained within the permit, is being sent to the **Gardnerville Record-Courier** and the **Reno Gazette Journal** for publication. Notice is also mailed to interested persons in the NDEP-BWPC mailing list database. Anyone wishing to comment on the proposed permit can do so in writing up through the noticed comment period date, as designated herein, which must be through a period of at least 30 days following the date of the public notice. All materials being submitted must be hand-delivered, e-mailed, faxed or postmarked no later than 5:00 P.M. PST, or PDT if in effect, on September 11, 2009, the close of noticed comment period. 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, 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 reason(s) why a hearing is warranted.

Any public hearing held by the Administrator will be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings will 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: E. Samuel Stegeman, P.E.
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