



NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(Pursuant to NAC 445A.874)

Permittee Name: Clark County School District (CCSD)
Project Name: CCSD Transportation Facility #1548
Permit Action: UIC Draft Permit Renewal
Permit Number: UNEV2005211

Type of Project: Non-contact
Address: 975 Welpman Way
Las Vegas, Nevada
Injection Wells (#): one

A. Description of Injection

Location: The injection well is a subsurface infiltration system located at the future CCSD Transportation Facility #1548, 975 Welpman Way, Las Vegas, Nevada in the SW ¼ SE ¼ of Section 8, T23S, R61E, MDB&M, in Clark County. Groundwater is present at a depth of about 240-260 feet bgs.

Latitude: 35° 57' 30" N
Longitude: 115° 10' 45" W

Characteristics: The subsurface infiltration system consists of an 85 feet x 126 feet condensation water drain field, a dosing tank, 4-inch diameter perforated pipe placed 12 to 24 inches below the surface and at least 12 feet apart, and gravel that is placed to a depth of 3 feet. Potable water used in a 30-unit evaporative cooler system (condensate water) will be injected. The system will be operational only during the months when the evaporative cooler system is used. Six months after startup, this permit will be re-evaluated as to whether the injection concentrations and flows warrant a treatment system prior to injection. This permit is issued on a one-time basis for a 5-year time period after which it is anticipated that sewer connection will be available.

The infiltration field shall be located at least 100 feet north of the Large Capacity Septic System leach field (UIC Permit #GU920140153). Injection shall not exceed 6,500 gallons per day. It is anticipated that during the summer months, **approximately half of the maximum flow into the system will evaporate in the subsurface infiltration field.**

B. Synopsis

2012 Renewal: the system has been operating since summer 2007, and appears to be operating normally, and without any issues. Due to the economic issues, sewer will not likely be available for some time, and the current system will be used indefinitely -

along with the large capacity septic system.

Original Synopsis:

The subject site will be built as the CCSD Transportation Facility #1548 school bus maintenance yards. Once the city sewer system reaches the area, the cooling water lines will be plumbed into the city system and the dosing tank and drain field will be abandoned.

The drain field was designed and sized using the Nevada Division of Environmental Protection WTS-22 Design Criteria for Septic Tanks and Individual Disposal Systems. A percolation test was performed at the facility on June 23, 2004 to a depth of 4 feet below ground surface (bgs). The average percolation rate at the facility was 5 minutes per inch. In addition, three profile holes were drilled to a depth of 10 feet bgs. Groundwater was not encountered in any of the borings.

The evaporative coolers bleed off water by continuously draining a small amount of water while it is in use. This flow rate can be manually set by the owner with the limits of 8 to 18 gallons per hour of usage. The evaporative coolers will also evaporate a portion of the feed water, with the amount of water evaporated varying with outdoor temperature and humidity. Based upon equations given by the manufacturer, Champion Coolers, the amount of water evaporated in each cooler during hot, dry summer days could be as high as 40 gallons per hour, while a very small amount of water will be evaporated during cooler, humid days. Based upon an average bleed-off flow rate of 10 gallons per hour, the ratio of feed water to bleed-off can range from 4:12 to 1:1 depending on the atmospheric conditions. If all 30 coolers run for 12 hours per day, with the bleed-off valves fully open, the maximum amount of water drained per day would be approximately 6,500 gallons.

Regarding water quality, evaporative coolers will not add any more minerals to the feed water. However, during the evaporation process, only pure water is evaporated and the minerals from water that gets evaporated will remain in the evaporative cooler sump. The addition of these existing minerals with minerals from the replacing feed water causes the water in the sump to become more concentrated. But, as long as water is being bled, the concentration will rise only as a function of the percentage of water evaporated versus the percentage of bleed-off water.

Per the Las Vegas Valley Water District, the Total Dissolved Solids (TDS) are, on average, around 631 parts per million (ppm). The evaporative cooler system is expected to concentrate constituents in the water up to 4 times. This would mean the drain water from the evaporative coolers could be estimated to be between 631 and 2500 ppm.

Condensate water from the evaporative cooler will exit from the building into a SDR-35 PVC pipeline, which will run to the dosing tank. The condensate water will be distributed into a series of at least 14 perforated pipes located in the drain field. The evaporative coolers will not be operated for approximately seven months each year. Since there will not be a continuous feed of water to this system, there will not be a

continuous "wetting front" in the unsaturated zone.

C. Receiving Water Characteristics

The sedimentary profile beneath the site consists of sandy, silty gravel containing cobbles and small boulders. This material was found to be partially to moderately cemented, with interbedded lenses of caliche, dense to very hard, dry to slightly moist and light brown in color. Groundwater is present at a depth of about 240-260 feet bgs.

The inorganic chemical analysis of the receiving zone and of the condensate water will be required when the two monitoring wells are installed.

The Bureau of Water Pollution Control's ArcIMS Data Mapper Tool was checked for the location of Public Water Supply Wells in the area. There were three wells to the north and east of the site. The well owners will be sent a copy of the Public Notice. The two monitoring wells required on site will be located to the east and south of the subsurface infiltration system.

D. Procedures for Public Comment

The Las Vegas Review Journal and/or Las Vegas Sun will receive notice of the Division's intent to issue a UIC permit authorizing the facility to inject into the groundwater of the State of Nevada for publication. The notice will be 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 30 days following the publication date of the said 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 interstate agency, the regional administrator of EPA Region IX or any interested agency, person or group of persons.

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 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.

E. Proposed Determination

The Division has made the tentative determination to re-issue the permit for five years.

F. Proposed Limitations and Special Conditions

Injection shall not exceed 6,500 gallons per day. Condensate water shall not exceed 2,500 mg/L TDS. If any other parameters on UIC Sample List 1 exceed Federal and State Drinking Water Standard Maximum Contaminant Levels (MCLs) by a factor of 2, the Nevada Division of Environmental Protection ("Division") may require treatment prior to injection.

G. Rationale for Permit Requirements

The permit conditions will help to ensure that the injectate does not adversely affect the existing water quality or hydrologic regime.

Monitoring well sampling was removed from the permit since depth to groundwater is deep, and no degradation has occurred in six years.

Prepared by: Becky E. Linvill
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