

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

F A C T S H E E T (pursuant to NAC 445A.236)

Permittee Name: Lyon County Public Works Department
P. O. Box 1699
Dayton, Lyon County, Nevada 89403

Permit Number: NEV10017

Permitted Unit: South Dayton Valley Wastewater Treatment
Plant (SDVWWTP/South Plant)

Location: The South Dayton Valley Wastewater Treatment Plant
is located at 200 Lakes Boulevard, in Dayton,
Nevada. Section 19, Township 16N., Range 22E.
MDB&M. Latitude: 39E14'20"N, Longitude:
119E32'59"W.

Description of Facility and Discharge:

The Permittee has applied for renewal of discharge permit NEV10017 for the South Dayton Valley Wastewater Treatment Plant/South Plant. The facility has two treatment trains: the Austgen Biojet (ABJ) sequencing batch reactor (SBR) mechanical plant, and an aerated pond system. The facility, which treats domestic residential and commercial sewage generated in the Dayton service area, providing secondary treated, denitrified and disinfected Category B effluent which is used for seasonal spray and drip irrigation (reuse) on the nearby 3 J=s/Dayton Valley Golf Course, common areas and streetscapes under permit No. NEV2001501. The pond system discharges to the on site rapid infiltration basins (RIBs)with the SBR discharging to the RIBS in the winter.

The SBR plant utilizes an activated sludge, extended aeration treatment process in two parallel adjoined basins. The ABJ plant is designed to treat a maximum 0.200 MGD of domestic sewage and is adjacent to the present facility's pond system. The existing pond system provides secondary treatment and consists of a parallel system of two aerated primary ponds, each with a 363,000 gallon capacity, two secondary treatment ponds with a 4.94-million gallon and a 4.06-million gallon capacity respectively, and four RIBs (one more to be constructed during the term of this permit), each with a 600,000-gallon capacity for disposal. The pond system had served as Dayton's sole treatment plant from about 1987 to when the new SBR plant became operational in 2001; the pond system treats the sewage generated from the Dayton industrial area, which lies south of the facility. Future pond modifications and upgrades to include new synthetic liners for the four ponds, additional aeration capabilities, and other improvements along with disinfection facilities to produce Category B effluent, and, meeting that quality, and with NDEP

approval may be available for reuse. The pond system and the RIBs also serve as an emergency outfall for the ABJ mechanical plant and provide winter storage and disposal for the treated South Plant effluent. Treated effluent pumped to South Plant from the Rolling A Regional Plant will be directed into the effluent distribution system serving the golf course for reuse irrigation or to other reuse. The total capacity of the treatment plant is 0.446 MGD.

Winter storage of the treated effluent discharged from the mechanical plant is accommodated by the Dayton Valley Golf Course lakes, and if needed, the effluent can be directed to the RIBs for disposal. The RIBs each have a 0.60 MGD capacity.

Additional possible South Plant upgrades during the next five years include a new headworks building with screening and grit removal for all flows from Lift Station #2.

Mechanical SBR Plant:

Outfall 001=golf course reuse irrigation, common/commercial areas, streetscapes and winter golf course pond storage

Outfall 002=RIBs for disposal

Outfall 004=export of sewage to Rolling A Regional Plant

Outfall 005=Construction water and dust control

Pond System:

Outfall 003=Ribs for disposal

Outfall 006=future reuse uses

Flow

The permitted 30-Day Average flow of 0.200 MGD has been set for the mechanical plant, and a 30-Day Average flow of 0.246 MGD for the pond system, with a total of 0.446 MGD flow for both systems.

Receiving Water Characteristics:

Depth to groundwater near the plant site is approximately 75 to 85 feet below ground surface and is potable.

Groundwater samples are collected and analyzed quarterly from two downgradient monitoring wells. The Dayton Utility's water supply wells are located about one mile from the treatment plant site.

Procedures for Public Comment:

The Notice of the Division's intent to modify and reissue a permit authorizing the facility to discharge to the groundwater of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Dayton Courier** and the **Nevada Appeal**

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 by November 23, 2007, a period of 30 days following the date of publication 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 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.238.

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

Proposed Effluent Limitations: SBR Facility

<u>PARAMETERS</u>	<u>DISCHARGE LIMITATIONS</u>		<u>MONITORING REQUIREMENTS</u>
	<u>30-day Ave.</u>	<u>Daily Max</u>	<u>Measurement</u>
FLOW:			
Influent:	SBR 0.200 MGD	M & R MGD	Continuous
Influent:	Pond 0.246 MGD	M & R MGD	Continuous
FLOW:			
Effluent:			
Outfall 001:	M & R MGD	M & R MGD	Meter
Outfall 002:	M & R MGD	M & R MGD	Meter
Outfall 004:	M & R MGD	M & E MGD	Meter
Outfall 005:	M & R MGD	M & R MGD	Meter
Influent: SBR			
BOD ₅ :	M & R mg/L	M & R mg/L	Weekly
TSS: mg/L	M & R mg/L	M & R mg/L	Weekly

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Effluent:	SBR		
BOD ₅ :	30 mg/L	45 mg/L	Weekly
TSS:	30 mg/L	45 mg/L	Weekly
Fecal Coliform:	2.2 CFU/MPN 100 ml	23 CFU/MPN 100 ml*	Monthly
Nitrate as N:	M & R mg/L	M & R mg/L	Monthly
Ammonia as N:	M & R mg/L	M & R mg/L	Monthly
Total Nitrogen as N:	10 mg/L	M & R	Monthly
pH:	Between 6.0 and 9.0 S.U.		Monthly

Proposed Effluent Limitations: Pond System

<u>PARAMETERS</u>	<u>DISCHARGE LIMITATIONS</u>	<u>MONITORING REQUIREMENTS</u>
	<u>30-day Ave.</u> <u>Daily Max</u>	<u>Measurement</u>

POND SYSTEM:

Effluent FLOW:

Outfall 003	M & R	M & R	Continuous
Outfall 006	M & R	M & R	Calculate

Influent:

CBOD ₅ :mg/L	M & R	M & R	Monthly
TSS:mg/L	M & R	M & R	Monthly
pH: SU	M & R	M & R	Monthly

Effluent:

CBOD ₅ :	30 mg/L	45 mg/L	Monthly
TSS:	M & R mg/L	90 mg/L	Monthly
Nitrate as N:	M & R mg/L	M & R mg/L	Monthly
Total Nitrogen as N:	M & R mg/L	M & R mg/L	Monthly
Ammonia as N:	M & R mg/L	M & R mg/L	Monthly
pH:	Between 6.0 and 9.0 S.U.		Monthly
Priority Pollutants plus Metals:	Monitor and Report		4th Quarter
Sb		0.146 mg/L	Quarterly
As		0.05 mg/L	Quarterly
Ba		2.0 mg/L	Quarterly
Be		0.0 mg/L	Quarterly
Cd		0.005 mg/L	Quarterly
Cr		0.10 mg/L	Quarterly
Cu		1.3 mg/L	Quarterly
Pb		0.05 mg/L	Quarterly

Hg	0.002 mg/L	Quarterly
Ni	0.0134 mg/L	Quarterly
Se	0.050 mg/L	Quarterly
Ag	0.05 mg/L	Quarterly
Zn	2.0 mg/L	Quarterly

MGD = million gallons per day; ml = milliliters; mg/L = milligrams per liter; CFU* = colony forming units; MPN* = most probable number;

Groundwater Monitoring MONITORING WELLS
PARAMETERS

Frequency

TOTAL DISSOLVED SOLIDS:	Monitor and Report	Quarterly
NITRATE as N:	Monitor and Report	Quarterly
TOTAL NITROGEN as N: 10 mg/L (Part I.A.10)		Quarterly
CHLORIDE:	Monitor and Report	Quarterly
GROUNDWATER ELEVATION:	Monitor and Report	Quarterly
DEPTH TO GROUNDWATER:	Monitor and Report	Quarterly

Schedule of Compliance:

1. Revisions to the approved O & M Manual shall include any updates to the Sludge Management Plan, and details relating to the sewage export and effluent handling and management delivered to South Plant from Rolling A. These updates shall be submitted to the Division for review and approval within 90 days of permit issuance.

Rationale For Permit Requirements

Effluent monitoring is required to assess the level of treatment being provided in each treatment train, and to determine when design capacity is being approached. Metals and Priority Pollutant monitoring of effluent generated from the industrial area is required to protect groundwater.

Groundwater monitoring is required to ensure that operations of the facility do not degrade groundwaters of the State.

Proposed Determination

The Division has made the tentative determination to reissue the proposed permit for a five (5) year period.

Prepared by: Icyl C. Mulligan
July 2007
October 2007