



# STATE OF NEVADA

Department of Conservation & Natural Resources

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

DIVISION OF ENVIRONMENTAL PROTECTION

Colleen Cripps, Ph.D., Administrator

## FACTSHEET (pursuant to NAC 445A.236)

**Permittee Name:** NEVADA POWER CO DBA NV ENERGY  
6226 W SAHARA AVE, MS 30  
LAS VEGAS, NV - 89119

**Permit Number:** NS2002500

**Location:** WALTER M HIGGINS III GENERATING STATION, CLARK  
1275 EAST PRIMM BOULEVARD, PRIMM, NV - 89019  
LATITUDE: 35.614167, LONGITUDE: -115.354167  
TOWNSHIP: T27S, RANGE: R59E, SECTION: S10

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	EVAPORATION POND	External Outfall		LAS VEGAS	NV	89019	CLARK	36.614167	-115.354167	DOUBLE LINED EVAPORATION POND
002	1M GALLON MAKE-UP WATER STORAGE TANK	External Outfall		LAS VEGAS	NV	89019	CLARK	36.614167	-115.354167	DOUBLE LINED EVAPORATION POND

### General:

The Permittee, NV Energy, has applied for renewal of groundwater discharge permit NS2002500, formerly NEV2002500. NV Energy owns and operates the Walter M. Higgins III Generating Station (WHGS). Located in Primm, Nevada at 1275 East Primm Boulevard, the facility is situated east of the Primm Casino properties and Interstate 15. The WHGS consists of two natural gas-fired units. The rated generating capacity is 560 Megawatts total output.

Water used for the WHGS operations is supplied from two sources. The primary source of water is treated disinfected effluent supplied by the Primm Wastewater Treatment Plant via an effluent lift station. WHGS provides additional treatment of Primm's effluent using a Pall (Brand) Micro-Filter (e.g., <0.1 micron) and a High-Efficiency Reverse Osmosis (HERO) unit meet an effluent quality of 2.2 CFU/100 ml Total Coliform. The treated water is then stored in a one million gallon storage tank to supply plant make-up water, service water and a fire suppression system. A secondary source of emergency use back-up water is available from an onsite production well in the event the treated effluent supply is interrupted. The onsite production well also supplies the domestic water service for the office area. Sanitary wastes are discharged to an onsite septic system.

### Discharge Characteristics:

Water waste streams discharged to the evaporation pond include reject water/brine from the HERO water treatment system, reject waste streams from the PALL microfiltration system, stormwater collected on site and any operational treated water discharges. Additionally, service water from floor drains, with a potential for oily contamination, are treated via an oil/water separator and piped to the evaporation pond.

### Receiving Water:

The evaporation pond is 675 x 360 feet in size, and 13.5 feet deep, including three feet of freeboard. The evaporation pond is oriented in a north-south direction and lined with two 60-mil thick HDPE geomembrane

liners with a leak detection and removal system (LDRS) installed between the two liners to detect and automatically remove leakage through a 160-mil geonet liner to a collection trench in the bottom of pond. The inner exposed primary liner is covered with a 12-inch thick layer of protective cover material to prevent wind uplift and mechanical or other types of damage. The interior side slopes are covered with geotextile fabric and riprap to prevent wind and water erosion of the liner material. The dike areas surrounding the cell berms are wide enough to provide access for inspection, monitoring and maintenance. The entire pond area is fenced with a 6-foot high chain link fence topped with barbed wire. Tortoise protection fences are installed at the base of the chain link fencing.

**Summary of Changes From Previous Permit:**

Due to a new permit naming convention at NDEP, Bureau of Water Pollution Control, the permit identification has been changed from NEV2002500 to NS2002500. This change does not reflect a change in the type of permit being issued.

The requirement to record the staff gauge reading has been moved from outfall 002 reporting to the outfall 001 reporting. Additionally the requirement to do staff gauge readings has been changed from weekly to monthly.

The requirement to sample Total Coliform has been changed from weekly sampling to monthly sampling. Weekly test results for the past 5 years and since the PALL Microfilter was installed have shown non-detect (ND) levels.

The requirement to measure temperature "prior to outfall 001 and in the pond at time of sampling" has been removed.

Regulatory liner leak rate monitoring and reporting has been added to the permit for outfall 001.

**Re-use Discharge Limitations Table for Sample Location 002 (External Outfall) To Be Reported Monthly**

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		See Footnote <sup>[1]</sup>	002	Continuous	METER
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		See Footnote <sup>[1]</sup>	002	Continuous	METER
Coliform, total general	Daily Maximum		<= 23 Colony Forming Units per 100ml T (CFU/100mL)	See Footnote <sup>[2]</sup>	002	Monthly	DISCRT
Coliform, total general	30 Day Average		<= 2.2 Colony Forming Units per 100ml T (CFU/100mL)	See Footnote <sup>[2]</sup>	002	Monthly	DISCRT

Notes (Re-use Discharge Limitations Table):

1. Flow rate shall be monitored after the filtration units and prior storage.
2. Total Coliform shall be monitored at the discharge from the storage tank.

**Ponds / Rapid Infiltration Basins 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
Liner Leakage Rate	Daily Maximum	<= 500 Gallons per Acre per Day (gal/acre/d)		Effluent Gross <sup>[1]</sup>	001	Quarterly	DISCRT
Freeboard	Quarterly Maximum		<= 36 Inches (in)	Internal Monitoring Point	001	Monthly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross <sup>[1]</sup>	001	Quarterly	DISCRT
Oil & grease	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross <sup>[1]</sup>	001	Quarterly	DISCRT
Total Petroleum Hydrocarbons - Diesel	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross <sup>[1]</sup>	001	Quarterly	DISCRT
Total Petroleum Hydrocarbons - Gasoline	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross <sup>[1]</sup>	001	Quarterly	DISCRT
pH	Value		M&R Standard Units (SU)	Effluent Gross <sup>[1]</sup>	001	Quarterly	DISCRT
Flow, total	Quarterly Maximum	M&R Gallons (gal)		Effluent Gross <sup>[1]</sup>	001	Continuous	METER

Notes (Ponds / Rapid Infiltration Basins):

- Parameters shall be monitored prior to discharge into the evaporation pond.

**Ponds / Rapid Infiltration Basins for Sample Location 001 (External Outfall) To Be Reported Annually**

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chromium, total (as Cr)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Antimony, total (as Sb)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Arsenic, total recoverable	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Beryllium, total (as Be)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Cadmium, total (as Cd)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Copper, total (as Cu)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Lead, total (as Pb)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Mercury, total (as Hg)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Nickel, total (as Ni)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Selenium, total (as Se)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Silver, total (as Ag)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT
Thallium, total (as Tl)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT

**Ponds / Rapid Infiltration Basins for Sample Location 001 (External Outfall) To Be Reported Annually**

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Zinc, total (as Zn)	Annual Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	001	Annual <sup>[1]</sup>	DISCRT

Notes (Ponds / Rapid Infiltration Basins):

- Annual measurements shall be conducted in the 4th quarter of each calendar year.

**Rationale for Permit Requirements:**

Monitoring is required to characterize the water quality contained in the evaporation pond and the quantity disposed into the pond. Reuse monitoring is conducted to ensure quality for the use intended; flow to document the quantity of reuse water entering into the plant make-up water storage tank.

**Fecal Coliform:**

Total Coliform: 2.2 CFU/100 ml 30-day average and 23 CFU/100 ml daily max.

**Special Conditions:**

SA – Special Approvals / Conditions Table

Item #	Description
1	Section B.PB.9.6 - Color photographs of the permitted facilities and operations apply only to the processes applicable to the permitted discharges (e.g. ponds, discharge points, leak detection sumps, etc.)
2	Section B.PB.10 - does not apply to this permit. The freeboard requirement for the pond is approved for 2 feet in accordance with the report and calculations provided to and approved by NDEP.

**Flow:**

Evaporation Pond: Design Treatment Capacity - 0.101 MGD  
 Requested Flow - 0.070 MGD  
 Current Operational Flow - 0.014 MGD

1M Gallon Tank: Design Treatment Capacity - 0.432 MGD  
 Requested Flow - 0.425 MGD  
 Current Operational Flow - 0.103 MGD

**Corrective Action Sites:**

There are no Bureau of Corrective Actions remediation sites located within one mile of this facility.

**Wellhead Protection Program:**

This facility is not located within a Drinking Water Protection Area or an active Wellhead Protection Area established for any current well sources.

**Schedule of Compliance:**

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit for review and approval two (2) copies of an updated Operations and Maintenance (O&M) Manual. The O&M manual shall be prepared by a Nevada Registered Professional Engineer or a Division-approved qualified person. O&M Manuals prepared by Nevada Registered Professional Engineers must be signed and stamped in accordance with NAC 625.610. If no updates or revisions are required, the Permittee shall submit a letter stating such by the due date noted.	9/1/2014
2	The Permittee shall submit two (2) copies of an updated Effluent Management Plan (EMP) for review and approval by the Division. The EMP shall be prepared by a Nevada Registered Professional Engineer. If no updates or revisions are required, the Permittee shall submit a letter by the due date stating that there have been no changes to the previously approved EMP.	9/1/2014

**Deliverable Schedule:**

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	10/28/2014
2	Annual Report	Annually	1/28/2015

**Procedures for Public Comment:**

The Notice of the Division's intent to reissue a permit authorizing the facility to discharge to groundwater of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Las Vegas Review Journal** 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. **6/13/2014**, 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.605.

**Proposed Determination:**

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

Prepared by: **Michele Reid**  
 Date: **5/7/2014**  
 Title: **Staff I Associate Engineer**