



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

FACTSHEET (pursuant to NAC 445A.236)

Permittee Name: ACCIONA
602 ELDORADO VALLEY DRIVE
BOULDER CITY, NV - 89005

Permit Number: NS2007503

Location: NEVADA SOLAR ONE, CLARK
602 ELDORADO VALLEY DRIVE, BOULDER CITY, NV - 89005
LATITUDE: 35.808333, LONGITUDE: -114.975556
TOWNSHIP: T25S, RANGE: R63E, SECTION: 6

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	POND 1	Surface Disposal Site		BOULDER CITY	NV	89005	CLARK	35.80	-115	GROUNDWATER
002	POND 2	Surface Disposal Site		BOULDER CITY	NV	89005	CLARK	35.80	-115	GROUNDWATER
003	DISCHARGE TO PONDS 1 AND 2	Sum		BOULDER CITY	NV	89005	CLARK	35.80	-115	GROUNDWATER
004	POND 1 LEAK DETECTION	Internal Outfall		BOULDER CITY	NV	89005	CLARK	35.80	-115	GROUNDWATER
005	POND 2 LEAK DETECTION	Internal Outfall		BOULDER CITY	NV	89005	CLARK	35.80	-115	GROUNDWATER
006	DUST SUPPRESSION FROM POND 1 AND POND 2	Land Application Site		BOULDER CITY	NV	89005	CLARK	35.80	-115	GROUNDWATER

General:

The Nevada Solar One Power Station (NSOPS) is a 64-megawatt (MW) solar thermal electric generating plant located in the Eldorado Valley, Clark County, Nevada. The permit authorizes the permittee to discharge industrial process wastewater, including cooling tower and boiler blowdown, equipment sumps, floor drains and wash water, service water, filter backwash, reverse osmosis (RO) reject water, and oil-water separator water, to two double-lined evaporation ponds. The proposed reuse 0.048 Million Gallons per Day (MGD) maximum rate withdrawn from pond storage will provide the applicant ability to address infrequent needs for additional short term dust suppression capacity beyond usual operating conditions that may be necessary for occurrences such as during more severe weather conditions which periodically happen at the site or during additional construction activity.

Water in the cooling tower will be recycled through the tower up to seven times with chloride concentration monitoring. Blowdown from the tower will be used as part of the system to control water quality in the tower. The water in the tower and the blowdown stream will be treated to avoid algae growth and to maintain pH between 6.0 and 8.0 standard units (SU).

The RO system generates high quality demineralized water for the steam cycle of the power plant. The RO reject water flows to a sump that also collects other waste streams at the Power Block Building. These waste streams include the condensate from the air compressor system, water from floor drains in the RO room, and, during some fire pump operating conditions, a flow of potable water from the diesel driven fire pump. RO system reject water has a pH of approximately 6.0 SU. When the system is in the cleaning mode to clean the RO membranes, the reject water may have a pH as low as 4.0 SU.

Discharge Characteristics:

From January 2008 through December 2012, the Permittee had only 2 permit violations. Both violations were for flow rate. Because the ponds are designed for a higher flow rate than is permitted, the permittee requested that the flow limit be increased from 0.15 MGD to 0.249 MGD.

Receiving Water:

Although the double-lined evaporation ponds are designed to prevent any discharges, the potential receiving water in the event of a leak is the groundwaters of the State of Nevada. There is also a small potential for dust suppression reuse water to reach the groundwater. Groundwater in the area is reported to be around 350 feet below the ground surface.

Summary of Changes From Previous Permit:

Because the Permittee has occasionally exceeded the flow limit, but the ponds are designed to handle more flow than they are permitted for, the Permittee has requested a flow limit increase from 0.15 MGD to 0.249 MGD. In order to ensure the ponds can handle the additional flow, the Permittee must now report the freeboard of the ponds quarterly.

Due to a new Permit naming conventions at NDEP, Bureau of Water Pollution Control, the permit ID has been changed from NEV2007503 to NS2007503. This change does not reflect a change in the type of permit being issued. NEV and NS permits are for groundwater discharges to the State of Nevada. These are not to be confused with "NV" permits which are reserved for NPDES Permitting.

Proposed Effluent Limitations:

The proposed discharges shall be monitored and recorded as outlined in the following tables:

Re-use Discharge Limitations Table for Sample Location 006 (Land Application Site) To Be Reported Quarterly^[1]

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= .048 Million Gallons per Day (Mgal/d)		Prior to Reuse	006	Continuous	METER
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	006	Continuous	METER
Hydrocarbons, total petroleum	Value		<= 1 Milligrams per Liter (mg/L)	Prior to Reuse	006	Quarterly	DISCRT

Notes (Re-use Discharge Limitations Table):

1. Report readings from flow meter on discharge line removing fluids from Pond 1 or Pond 2.

Ponds / Rapid Infiltration Basins for Sample Location 001 (Surface Disposal Site) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Freeboard	Minimum		>= 2 Feet (ft)	See Footnote ^[1]	001	Quarterly	VISUAL

Notes (Ponds / Rapid Infiltration Basins):

- Record staff gauge reading for Pond 1 Quarterly.

Ponds / Rapid Infiltration Basins for Sample Location 002 (Surface Disposal Site) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Freeboard	Minimum		>= 2 Feet (ft)	See Footnote ^[1]	002	Quarterly	VISUAL

Notes (Ponds / Rapid Infiltration Basins):

1. Record staff gauge reading for Pond 2 quarterly.

Ponds / Rapid Infiltration Basins for Sample Location 003 (Sum) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	30 Day Average	<= .249 Million Gallons per Day (Mgal/d)		Effluent Gross	003	Continuous	METER
Flow rate	Daily Maximum	<= .249 Million Gallons per Day (Mgal/d)		Effluent Gross	003	Continuous	METER

Ponds / Rapid Infiltration Basins for Sample Location 003 (Sum) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
pH, minimum	Minimum Value		>= 4 Standard Units (SU)	Effluent Gross	003	Quarterly	GRAB
pH, maximum	Maximum Value		<= 10 Standard Units (SU)	Effluent Gross	003	Quarterly	GRAB
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Quarterly	GRAB
Oil & grease	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Quarterly	GRAB

Ponds / Rapid Infiltration Basins for Sample Location 003 (Sum) To Be Reported Annually

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Arsenic, total (as As)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Beryllium, total (as Be)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Chromium, total (as Cr)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Antimony, total (as Sb)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Cadmium, total (as Cd)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Copper, total (as Cu)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Lead, total (as Pb)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Mercury, total (as Hg)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Nickel, total (as Ni)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Selenium, total (as Se)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Silver, total (as Ag)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
Thallium, total (as Tl)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB
			M&R				

Ponds / Rapid Infiltration Basins for Sample Location 003 (Sum) To Be Reported Annually

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Zinc, total (as Zn)	Value		Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	GRAB

Ponds / Rapid Infiltration Basins for Sample Location 004 (Internal Outfall) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= 150 Gallons per Day (gal/d)		See Footnote ^[1]	004	Continuous	METER
Flow rate	30 Day Average	<= 150 Gallons per Day (gal/d)		See Footnote ^[1]	004	Continuous	METER

Notes (Ponds / Rapid Infiltration Basins):

1. record reading from leak detection flow meter for Pond 1.

Ponds / Rapid Infiltration Basins for Sample Location 005 (Internal Outfall) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= 150 Gallons per Day (gal/d)		See Footnote ^[1]	005	Continuous	METER
Flow rate	30 Day Average	<= 150 Gallons per Day (gal/d)		See Footnote ^[1]	005	Continuous	METER

Notes (Ponds / Rapid Infiltration Basins):

- 1. record reading from leak detection flow meter for Pond 2.

Special Conditions:

SA – Special Approvals / Conditions Table

Item #	Description
1	Condition B.PB.10 does not apply to this permit; the freeboard requirement for the ponds is 2 feet in accordance with calculations approved by NDEP.

Flow:

Because the ponds are designed for a higher flow rate than is permitted, the permittee requested that the flow limit be increased from 0.15 MGD to 0.249 MGD.

Corrective Action Sites:

There are no Bureau of Corrective Actions sites within a one-mile radius of this facility.

Wellhead Protection Program:

This facility is not within an established wellhead protection area.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee must submit for Division review and approval 2 copies of a new Operations and Maintenance (O&M) Manual. The O&M manual shall be prepared and stamped by a Nevada Registered Professional Engineer or other Qualified Person.	6/1/2013
2	The Permittee must submit for Division review and approval 2 copies of an updated Effluent Management Plan (EMP). The EMP shall be prepared and stamped by a Nevada Registered Professional Engineer or other Qualified Person. If there are no changes to the current EMP, the Permittee must submit a letter stating so.	6/1/2013

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly Report	Quarterly	7/28/2013
2	Annual Report	Annually	1/28/2014

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. **6/7/2013**, 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.650.

Proposed Determination:

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

Prepared by: **Robert Wimer**

Date: **4/29/2013**

Title: **E.I.**