FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: ACCIONA

602 ELDORADO VALLEY DRIVE
BOULDER CITY, NV 89005

Permit Number: NS2007503

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

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	Latitude	Longitude	Receiving Water
001	POND 1	External Outfall		35.808999	-114.9792	GROUNDWATER
002	POND 2	External Outfall		35.809002	-114.976947	GROUNDWATER
003	DISCHARGE TO PONDS 1 AND 2	Sum		35.809058	-114.977866	GROUNDWATER
004	POND 1 LEAK DETECTION	Internal Outfall		35.808999	-114.9792	GROUNDWATER
005	POND 2 LEAK DETECTION	Internal Outfall		35.809002	-114.9760	GROUNDWATER
006	DUST SUPPRESSION FROM POND 1 AND POND 2	Land Application Site		35.809058	-114.977866	GROUNDWATER

Permit History/Description of Proposed Action
The Permittee, Acciona has applied for a permit renewal of the existing industrial process water reuse permit Nevada Solar One NS2007503. Nevada Solar One is a 64-megawatt solar thermal electric generating plant operating in Eldorado Valley in Clark County, Nevada.

This permit was first issued on June 25, 2007. There was a major modification to the permit on September 25, 2009. The most recent permit was issued on June 12, 2013, and expired on June 11, 2018; the permit has been administratively continued since.

Facility Overview
Nevada Solar One is a concentrated solar power plant. The plant generates power by using mirrored parabolic trough concentrators to reflect the sunlight onto closed series of tubes containing a synthetic fluid that is boiled creating steam, pressurizing the system forcing gases to spin a turbine to generate electrical power. The plant uses water to cool and condense the gas back into a liquid to be returned to the evaporator section of tubes.

Water for this site is supplied by a 14-inch water main from the City of Boulder City, then run through a reverse osmosis filter (RO). The rejected water is pumped to the evaporation ponds, and the filtered water

is run through 6 cycles in the cooling towers then sent to the evaporation ponds.

Nevada Solar One is authorized to discharge industrial process water from their cooling tower and boiler blowdown, equipment sumps, floor drains, wash water, service water, filter backwash, reverse osmosis reject water, and oil-water separator to two double lined evaporation ponds, and for use as onsite dust suppression.

The evaporation ponds are double lined with 60 mil High-Density Polyethylene (HDPE) liners. Each pond is equipped with a leak detection sump in between the liners that removes any leakage back into the pond. Nevada Solar One utilizes some of the process water for dust control, where the water is pumped from the ponds directly into water trucks.

The last Operation and Maintenance (O&M) Manual was received on January 13, 2014, the Permittee is required to provide an updated O&M every 10 years. An O&M will be required in three months of renewal of the permit.

The last Reclaimed Water Management Plan (RWMP) was received on January 13, 2014, the Permittee is required to provide an updated RWMP every 10 years. An RWMP will be required in three months of renewal of the permit.

Outfall Summary
Outfall 001: Pond 1. This outfall is monitored for Depth of water: Minimum of 2’ freeboard level.

Outfall 002: Pond 2. This outfall is monitored for Depth of water: Minimum of 2’ freeboard level.

Outfall 003: Sum of Discharge to Ponds 1 and 2. This outfall is metered for flow rate in million gallons per day (Mgal), and sampled for Antimony (Sb), Arsenic (As), Beryllium(Be), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Nickel (Ni), Oil and Grease, pH, Selenium (Se), Silver (Ag), Total Dissolved Solids (TDS), Thallium (Tl), and Zinc (Zn).

Outfall 004: Pond 1 Leak Detection. This outfall is metered for flow rate.

Outfall 005: Pond 2 Leak Detection. This outfall is metered for flow rate.

Outfall 006: Dust Suppression from Pond 1 and Pond 2. This outfall is metered for flow rate, and is monitored for Total Petroleum Hydrocarbons (TPH).

Effluent Characterization

Boulder City supplies water that is run through RO filter then used in the cooling tower 6 times where a portion of the water is evaporated, concentrating the TDS and TPH. This water is sent to the evaporation ponds where it is used as needed for dust control. The water that is used for dust control has a low probability of reaching groundwater due to the conditions at the site.

The average reported values for the time period of 2020-2025 are listed below:

Outfall 001: Pond 1
Depth of water: 3.09’

Outfall 002: Pond 2
Depth of water: 2.93’

Outfall 003: Sum of Discharge to Ponds 1 and 2
30-day average Flow Rate: 0.05 Mgal/d
Daily Max Flow Rate: 0.12 Mgal/d
Antimony (Sb): One recorded measurement of 0.16 mg/L in 2020

Copper (Cu): Two recorded measurements of 0.16 mg/L in 2020 and 0.19mg/L in 2022
Nickel (Ni): 0.11 mg/L
Average pH: 7.86
Silver (Ag): One recorded measurement of 0.19 mg/L in 2019
Total Dissolved Solids (TDS): 5201 mg/L
Zinc (Zn): 0.54 mg/L
As, Be, Cd, Cr, Pb, Hg, Oil and Grease, Se, Tl: Below Detection Limit

Outfall 004: Pond 1 Leak Detection.
30-day average Flow Rate: No Discharge
Daily Max Flow Rate: No Discharge

Outfall 005: Pond 2 Leak Detection.
30-day average Flow Rate: No Discharge
Daily Max Flow Rate: No Discharge

Outfall 006: Dust Suppression from Pond 1 and Pond 2
30-day average Flow Rate: No Discharge
Daily Max Flow Rate: No Discharge
Total Petroleum: There were only 2 recordable measurements 2.7 mg/L in 2022, and 1.1 mg/L in 2023

Pollutants of Concern
Pollutants of concern are any pollutants or parameters that are believed to be present in the discharge and could affect the physical, chemical, or biological condition of the receiving groundwater. Common pollutants of concern for cooling tower blowdown water are TDS and TPH.

Receiving Water
In the event of a catastrophic failure of the evaporation pond liners, the receiving water would be groundwater of the State. The water used for cooling is discharged to evaporation ponds where some of the water is used for dust control. The receiving ponds are monitored by a pond interstitial leak detection sump in each pond and monitored for the depth of water in the pond.

Compliance History
The Permittee is in compliance with the permit.

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 (Dust Supperssion From Pond 1 And 2) To Be Reported Quarterly[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Hydrocarbons, total petroleum	Daily Maximum		<= 1.0 Milligrams per Liter (mg/L)	Prior to Reuse	006	Quarterly	DISCRT
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	006	Continuous	METER
Flow rate	Daily Maximum	<= 0.048 Million Gallons per Day (Mgal/d)		Prior to Reuse	006	Continuous	METER

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 (Pond 1) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	**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):

1. Record staff gauge reading for Pond 1 Quarterly.

Ponds / Rapid Infiltration Basins for Sample Location 002 (Pond 2) To Be Reported Quarterly

	Discharge Limitations			Monitoring Requirements			
Parameter	**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 (Discharge To Ponds 1 And 2) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Flow rate	Daily Maximum	<= 0.249 Million Gallons per Day (Mgal/d)		Effluent Gross	003	Continuous	METER
Flow rate	30 Day Average	<= 0.249 Million Gallons per Day (Mgal/d)		Effluent Gross	003	Continuous	METER

Ponds / Rapid Infiltration Basins for Sample Location 003 (Discharge To Ponds 1 And 2) To Be Reported Quarterly

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

Ponds / Rapid Infiltration Basins for Sample Location 003 (Discharge To Ponds 1 And 2) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Zinc, dissolved (as Zn)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Thallium, dissolved (as Tl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Silver, dissolved (as Ag)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Selenium, dissolved [as Se]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Nickel, total (as Ni)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Mercury, dissolved (as Hg)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Lead, dissolved (as Pb)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Copper, dissolved (as Cu)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Cadmium, dissolved (as Cd)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Antimony, dissolved (as Sb)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Chromium, dissolved (as Cr)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
			M&R				

Ponds / Rapid Infiltration Basins for Sample Location 003 (Discharge To Ponds 1 And 2) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Beryllium, dissolved (as Be)	Daily Maximum		Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT
Arsenic, dissolved (as As)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Annual	DISCRT

Ponds / Rapid Infiltration Basins for Sample Location 004 (Pond 1 Leak Detection) To Be Reported Quarterly

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

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

Notes (Ponds / Rapid Infiltration Basins):

1. Record reading from leak detection flow meter for Pond 2.

Summary of Changes From Previous Permit
The parameters for Outfall 004 and Outfall 005 have been changed from Flow Rate to Liner Leakage Rate, which changes the reported quantity units from millions of gallons per day to gallon per acre per day. This change is based on the Ten State Standards allowance of less than or equal to 500 gallons per acre per day.

Technology Based Effluent Limitations
Technology based effluent limitations are not applicable on this permit.

Water Quality Based Effluent Limitations
Water quality-based effluent limitations are not applicable to this permit.

Proposed Water Quality Based Effluent Limits (monthly/weekly/daily)
Water quality-based effluent limitations are not applicable to this permit.

Basis for Effluent Limitations

The daily maximum flow rate of water used for dust control is limited to 0.2 Mgal,

The daily maximum flow rate of water used for heliostat washing is also limited to 0.2 Mgal.

The daily maximum flow rate of water discharged to the evaporation ponds is limited to 0.5 Mgal.

Ponds have a minimum freeboard depth of 2’ based on the area volume of the ponds.

Although the facility treats water to maintain a pH between 6.0 and 8.0 standard units (S.U.) to limit algae growth the pH limit is between 4 and 10 S.U. The lower pH of 4 S.U. is the minimum pH that the water can reach during the cleaning cycle, and the higher value of 10 S.U. is due to the caustic chemicals that are kept at the facility. The pH is monitored to protect the groundwater of the State.

TPH are limited to 1.0 mg/L. Monitoring is required to assess the level of treatment provided and to protect the groundwater of the State.

Metals from the Profile 1 list are monitored to assess the level of treatment provided and to protect the groundwater of the State.

Anti-backsliding
None of the proposed permit limits were changed to a less restrictive limit compared to those in the previous permit.

Antidegradation
The Division has developed an antidegradation regulation that is applied on a statewide basis, and which meets the statutory requirements of Nevada's water pollution control law found at Nevada Revised Statute (NRS) 445A.520 and NRS 445A.565 and is consistent with the federal antidegradation policy found at Title 40 in the Code of Federal Regulations (CFR) § 131.12. The objective of the Division's antidegradation regulation is to prevent degradation of Nevada's surface waters and maintain the unique attributes and special characteristics and water quality associated with high-quality waters.

As this permit is for discharges to groundwater, and not surface water, the new antidegradation rule is not applicable.

Special Conditions
For Special Conditions see table below:

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 a minimum of 2 feet in accordance with calculations approved by NDEP.

Discharges From Future Outfalls/ Planned Facility Changes
This Permittee does not anticipate changes to the outfalls or to the facilities.

Corrective Action Sites
There are no active Bureau of Corrective Actions (BCA) remediation sites within a one-mile radius of the solar plant.

Wellhead Protection Program
The outfalls are not located within a Wellhead Protection Area, which represents an approximate 10-year capture zone of a well, or within a Drinking Water Protection Area, which is defined by a 3,000-foot radius around a PWS well.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee must submit two (2) copies (one electronic and one hard copy) of a new Operations and Maintenance (O&M) Manual for Division review and approval. The O&M Manual shall be compiled in accordance with NDEP guidance document WTS-2, General Design Criteria for Preparing an O&M manual. The O&M manual shall be prepared and stamped by a Nevada Registered Professional Engineer or other Qualified Person.	3/30/2026
2	The Permittee shall submit two (2) copies (one electronic and one hard copy) of an updated Reclaimed Water Management Plan (RWMP), previously referred to as the Effluent Management Plan (EMP), for review and approval by the Division. The RWMP shall be prepared by a Nevada Registered Professional Engineer or other qualified person in accordance with WTS1B.	3/30/2026

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly Report	Quarterly	4/28/2026
2	Annual Report	Annually	1/28/2027

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to groundwater of the State of Nevada subject to the conditions contained within the permit, is being mailed to interested persons on our mailing list and will be posted on our website at https://ndep.nv.gov/posts. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **2/12/2026,** 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 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 Determination:

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

Prepared by: **Jason Reichelt**
Date: **1/9/2026**
Title: **Environmental Scientist 3**