

**Categorical Exclusion :
Documentation Format
for Actions Other Than
Hazardous Fuels and Fire
Rehabilitation Actions**

Table of Contents

1. Name	1
1.1. Background	1
1.1.1. BLM Office:Las Vegas Field Office	1
1.1.2. Lease/Serial/Case File No.: NVN-088284	1
1.1.3. Proposed Action Title/Type:	1
1.1.4. Location of Proposed Action:	1
1.1.5. Description of Proposed Action:	3
1.2. Land Use Plan Conformance	6
1.2.1. Land Use Plan Name:	6
1.2.2. Date Approved/Amended:	6
1.2.3. The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decision(s):	6
1.2.4. The proposed action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decision(s) (objectives, terms, and conditions) :	6
1.3. Compliance with NEPA:	7
1.4. Approval and Contact Information	7
1.4.1. Authorizing Official:	7
1.4.2. Contact Person	8

List of Tables

Table 1.1. Boring/Test Pit Location Information	1
Table 1.2. Water Well Location Information	3

Chapter 1. Name

1.1. Background

Silver State Solar, LLC submitted a Land Use Application and Permit (LUP) on March 8, 2010 to conduct geotechnical testing and for installation of an 8-inch-diameter test water well in support of the Silver State Solar PV Projects NVN-085077 and NVN-085801, located in Primm, Nevada.

1.1.1. BLM Office: Las Vegas Field Office

L5101-ER0000-LVRWF09F877000

1.1.2. Lease/Serial/Case File No.: NVN-088284

1.1.3. Proposed Action Title/Type:

Silver State Solar LLC Geotechnical testing and Water Well Site

1.1.4. Location of Proposed Action:

The proposed LUP is located in Primm, Nevada. Below are two tables showing the specific latitude and longitude for the bore holes, test pits, and water well location.

Geotech Locations

Table 1.1. Boring/Test Pit Location Information

Boring/Test Pit Name (Figure 7-1)	Latitude	Longitude	Area of Disturbance (sq. ft.)	Section (Figure 2-1) ^a	Location Photograph	Direction of Photograph
BV-1	35° 36' 45.77" N	115° 20' 28.41" W	600	11	7-6	NNW
BV-2	35° 36' 35.78" N	115° 20' 3.24" W	600	11	7-7	NNW
BV-3	35° 37' 14.35" N	115° 21' 34.33" W	600	3	7-8	NW

Boring/Test Pit Name (Figure 7-1)	Latitude	Longitude	Area of Disturbance (sq. ft.)	Section (Figure 2-1)^a	Location Photograph	Direction of Photograph
BV-4	35° 37' 44.30" N	115° 21' 27.05" W	600	3	7-9	W
BV-5	35° 37' 54.32" N	115° 20' 22.83" W	600	2	7-10	NNW
TP-1	35° 36' 20.59" N	115° 20' 19.81" W	800	14	7-11	NNW
TP-2	35° 36' 35.78" N	115° 20' 3.24" W	800	11	7-7	NNW
TP-3	35° 37' 14.35" N	115° 21' 34.33" W	800	3	7-8	NW
TP-4	35° 37' 44.30" N	115° 21' 27.05" W	800	3	7-9	W
TP-5	35° 35' 37.52" N	115° 21' 35.55" W	800	15	7-12	NNW
All		Total Disturbance (Sq. Ft.)	7,000			
All		Total (Acres)	0.16			

^a all Sections are T27S R59E MDBM

Test Well Location

Chapter 1 Name
Location of Proposed Action:

Table 1.2. Water Well Location Information

Latitude	Longitude	Area of Disturbance (sq. ft.)	Section (Figure 2-1)^a
35° 37' 13.92" N	115° 21' 24.06" W	5,600 (approx 0.13 acre)	3

^aAll Sections are T27S R59E MDBM

1.1.5. Description of Proposed Action:

Silver State Solar, LLC submitted a Land Use Application and Permit (LUP) on March 8, 2010 to conduct geotechnical testing and for installation of an 8-inch-diameter test water well in support of the Silver State Solar PV Projects NVN-085077 and NVN-085801, located in Primm, Nevada.

Use of these lands will allow Silver State Solar to determine the engineering characteristics of local soils and geology to develop a geological profile of the area. Installation of the test water well will allow Silver State Solar to test the capacity of the underlying aquifer to assess its potential use to meet Project development water demand. If the aquifer yield is satisfactory, the well will be left in place for subsequent use as a source of water for construction and operation of the Project. If the Silver State Solar project does not proceed, NextLight will properly abandon the well at BLM request.

Geotechnical Investigation

Field work for the geotechnical studies associated with this Land Use Application will take place and be complete within 60 days of the permit being issued. Once the consultant commences the field work, it is anticipated that all field work will be completed within 15 business days, subject to weather, heat and sensitive species avoidance delays. Sixty days provides sufficient time to accommodate scheduling and weather delays.

Geotechnical data collected will be analyzed to select the type and size of foundations required for the various project structures and equipment. Additionally, data about the soil resistance to electric current flow will be collected and used for the electrical grounding design to ensure the project meets electrical safety codes.

The geotechnical investigation will involve drilling five soil borings to a depth of 25 feet, and excavating five test pits to a depth of approximately 10 feet. The borings would be completed by a truck-mounted, soil-boring machine, and the test pits would be completed by a rubber-tired backhoe.

In addition, at each test pit and boring location, a steel test post (6-8" in width) will be driven into the ground to a depth of 6 to 12 feet. A light-duty truck-mounted impact post pounder will be used. Static tests will be performed to measure the strength of the embedded post. Once the testing is complete, the post will be removed and the hole backfilled with native soil and returned to its native state. The steel test post will be located within the previously disturbed area associated with the above mentioned test pits and borings.

Exact locations of borings and test pits will be flagged prior to disturbance, as well as the route to each test site and corners of the work areas. If directed by BLM, NextLight will schedule a field review of flagging, with the BLM Biologist.

Soil boring activities will require a work area approximately 20 by 30 feet at each location. A truck-mounted drilling rig will use hollow-stem auger drilling equipment to bore an approximately 5- to 6-inch-diameter hole to a depth of 25 feet. At completion of each soil boring, the bore hole will be backfilled with the material removed during boring, unless state and local regulations require more stringent backfilling methods

Test pit excavation will require a work area approximately 20 by 40 feet at each location. A rubber-tired backhoe will be used to excavate to an approximate depth of 10 feet. Each test pit will be approximately 3 feet wide and 10 feet long at the bottom. For worker safety and to minimize the area of disturbance, trench shields will be used, of which the ATS Series Aluminum Trench Shield is an example. The shields are Professional Engineer certified to comply with Occupational Safety and Health Administration requirements

Before excavation, the top 4 inches of soil will be removed from the test pit excavation and spoil pile area. Topsoil will be stockpiled for replacement at the site once test pit sampling has been completed and the test pit backfilled. Spoils material from the excavation will be placed adjacent to each side of the test pit. After inspection, recording of data, and collection of soil samples (approximately 50 pounds total at each test pit) by an engineer or geologist, the pit will be backfilled by the backhoe using the front end loader bucket. Backfill material will be compacted to the natural density of the adjacent soil. Testing of the compaction of the backfill will not be conducted.

Soil electrical resistivity measurements will be obtained at each of the above locations using equipment brought to the test location in a pick-up truck. As noted above, access to resistivity testing locations will be restricted to existing roads. The equipment is portable and will be carried by personnel during testing. Soil resistance measurements will be taken with four 3/8-inch metal rods, which are connected by 20-gauge wire to an electrical source—a 12 volt DC battery that will remain within the road limits. The rods will be inserted 3 to 6 inches into the ground such that the four rods form a straight line with the electrical source in the middle. Each rod will be inserted into the ground nine different times at an overall distance of 5 to 90 feet from the electrical source. The test then will be repeated at a right angle to the first test. Upon completing the sampling, boring holes and test pits will be removed backfilled, all materials will be removed, and surfaces will be regraded and smoothed at work sites and along access routes.

Test Water Well Installation

The installation of the test water well will allow Silver State Solar to test the capacity and water quality of the underlying aquifer to assess its potential to meet Project development water demand. If the aquifer yield is satisfactory, the well will be left in place for subsequent use as a source of water for construction and operation of the Project. However, if the yield is not satisfactory, or if it is determined that the well will not be used for Project development, or upon BLM request, it will be abandoned and decommissioned in accordance with applicable State and County requirements.

The water well will consist of a single, 8-inch-diameter well to an anticipated depth of approximately 600 feet below ground surface. The well will be located at the side of an existing road as shown in Figure 7-13 and identified as TW-1 (test well). As noted on Figure 7-13, access to the well site will via existing roads and washes. Well location may be moved up to 100 feet

along the access route if required to avoid sensitive resources. A work area approximately 80 feet by 70 feet (approximately 0.13 acre) will be required for well drilling operations. Table 7-2 provides coordinates and work area requirements. Photos of the well location are shown in Figure 7-14. Installation and testing of the well is anticipated to require 2 to 4 consecutive weeks.

The exact location of the test well and work area will be flagged prior to disturbance, as well as the route to the site. If directed by BLM, NextLight will schedule a field review of flagging, with the BLM Biologist.

The well will be installed by a State of Nevada certified well driller. The well will be completed by specialized well-drilling equipment, likely using a typical direct-mud rotary procedure, a method that is not uncommon in the Project area. Equipment anticipated to be used during the drilling operations includes a 600-hp drill rig and 500-hp air compressor. The equipment will access the test well location using only previously disturbed dirt roads on the Project site as shown in Figure 7-13. The equipment will only need to travel to and from the site one time and will remain on-site during the drilling work (subject to equipment operational issues). In addition to the equipment required for the drilling operations, two pickup truck support vehicles will likely also be used and will access the Project site and test well location daily during the test well drilling.

The drill rig will install an 8-inch-diameter well casing to a depth of 600 feet. The top four inches of soil will be removed from the work area prior to drilling the water well. The salvaged soil will be placed back over the work area at the completion of well installation. In the direct-mud rotary well casing installation method, the bore hole is advanced by rapid rotation of a drill bit mounted on the end of drill rods. The bit cuts and breaks the material at the bottom of the hole into small pieces (cuttings). The cuttings are removed by pumping drilling fluid (water, or water mixed with bentonite or other BLM-approved fluid enhancers) down through the drill rods and bit, and up the space between the bore hole and the drill rods. The drilling fluid also serves to cool the drill bit, stabilize the bore hole walls and prevent the flow of fluids into the surrounding earth materials.

Well construction will include the installation of a steel casing and well screen, cement grout and cap. As a part of the well installation process, the well will be pumped or agitated via compressed air to remove fine soil material that collects at the bottom of the well within the well screen area. This process will be performed until the water flows clear, approximately 8 to 12 hours. All water and fine soil will be discharged on to the ground surface. Installation materials and procedures required for well installation will be determined by a State of Nevada licensed well driller. All auger cuttings and drilling fluids will be removed from the work site for disposal in accordance with applicable rules and regulations.

At the completion of well development, the well will be pump tested to verify the aquifer capacity. The well would be pumped continuously at the design rate for approximately 24 hours. All water from the pump test will be discharged to the ground surface within an existing wash or road. Water quality samples will be taken for laboratory analysis.

At completion of the well installation and testing, the temporary work area will be restored to existing conditions with only the well remaining. The well will be capped and locked. The well will be incorporated into the Silver State Solar permanent facilities. If the Silver State Solar project does not proceed, NextLight will properly abandon well at BLM request in accordance with applicable State and County requirements.

Protective measures will be required to protect the well from damage from recreational uses. Protective measures will include placing four 6 inch diameter steel posts three feet into the

ground and projecting three feet above ground. The posts will be placed approximately 3 feet from the well casing.

Access

Geotechnical Investigation

Access routes for equipment and personnel to get to the test sites are shown on Figures 7-2 through 7-5. These figures also identify site coordinates. Table 7-1 identifies the soil boring and test pit sites (as shown on Figure 7-1), longitude and latitude, Section (as shown on Figure 2-1), and test site photograph of locations. Figures 7-6 through 7-12 are photographs of the proposed locations for borings and test pits.

Test Water Well Installation

The well will be located at the side of an existing road as shown in Figure 7-13 and identified as TW-1 (test well). As noted on Figure 7-13, access to the well site will via existing roads and washes. Well location may be moved up to 100 feet along the access route if required to avoid sensitive resources.

1.2. Land Use Plan Conformance

1.2.1. Land Use Plan Name:

Las Vegas Resource Management Plan and Final Environmental Impact Statement.

1.2.2. Date Approved/Amended:

October 5, 1998

1.2.3. The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decision(s):

1.2.4. The proposed action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decision(s) (objectives, terms, and conditions) :

Lands Management

Objective

Land Use Authorizations

Chapter 1 Name
Land Use Plan Conformance

LD-2. All public lands within the planning area, unless otherwise classified, segregated or withdrawn, and with the exception of Areas of Critical Environmental Concern and Wilderness Study Areas, are available at the discretion of the agency, for land use leases and permits under Section 302 of Federal Land Policy and Management Act and for airport leases under the authority of the Act of May 24, 1928, as amended.

Management Direction

LD-2-a. Land use lease or permit applications and airport lease applications will be addressed on a case-by-case basis, where consistent with other resource management objectives and local land uses. Special terms and conditions regarding use of the public lands involved will be developed as applicable.

1.3. Compliance with NEPA:

The Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 516 DM 2, Appendix 1, or 516 DM 11.9,

E. Realty

(19) Issuance of short-term (3 years or less) rights-of-way or land use authorizations for such uses as storage sites, apiary sites, and construction sites where the proposal includes rehabilitation to restore the land to its natural or original condition.

H. Other

(3) Conducting preliminary hazardous materials assessments and site investigations, site characterization studies and environmental monitoring. Included is siting, construction, installation and/or operation of small monitoring devices such as wells, particulate dust counters and automatic air or water samplers.

This categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects that may significantly affect the environment. The proposed action has been reviewed, and none of the extraordinary circumstances described in 516 DM 2 apply.

I considered:

[Describe any design features or mitigation factors considered here]

1.4. Approval and Contact Information

1.4.1. Authorizing Official:

Beth Ransel
Assistant Field Manager

Date

Lands Division

1.4.2. Contact Person