SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

June 21, 2010

To: Monisha Gangopadhyay / Tom Hurshman
CPUC / BLM
c/o Ecology and Environment, Inc.
130 Battery Street, Suite 400
San Francisco, CA 94954

From: Jack Horne, SCE Regulatory Project Manager

RE: Southern California Edison Company Comments on Draft Environmental Impact Report / Environmental Impact Statement for the Eldorado-Ivanpah Transmission Project (A.09-05-027)

Dear Ms. Gangopadhyay / Mr. Hurshman:

Thank you for the opportunity to comment on the Draft Environmental Impact Report / Environmental Impact Statement (DEIR/EIS) for the Eldorado-Ivanpah Transmission Project (A.09-05-027) (EITP or Project).

The attachments to this transmittal are provided via two e-mail messages today which contain Southern California Edison Company's (SCE) comments on the DEIR/EIS for EITP, as follows:

- EITP.SCE Comments to Draft EIR-EIS [via e-mail 1 of 2], and
- EITP.SCE Comments to Draft EIR-EIS_Appendices [via e-mail 2 of 2]

If you have any questions, you may contact me via telephone (626-302-4828), or e-mail (jack.horne@sce.com).

Sincerely,
/s/Jack Horne
Jack Horne

EITP DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT
SOUTHERN CALIFORNIA EDISON COMPANY
COMMENTS & SUGGESTED REVISIONS

Executive Summary

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	Executive Summary	ES-2 Lines 6-9	The applicant's purpose for the proposed project is to interconnect and deliver up to 1,400 megawatts (MW) of solar energy that is expected to be developed in the Ivanpah Valley area. SCE's ~~The~~ existing facilities at Eldorado Substation and existing Eldorado-Baker-Cool Water-Dunn Siding-Mountain Pass 115-kV ~~regional transmission~~ line~~s~~ cannot accommodate the additional power that would be generated by the anticipated solar projects in the Ivanpah Valley.	Please update the language to correctly describe system limitations that require the need for construction of the Eldorado-Ivanpah Transmission Project.
2.	Executive Summary	ES-2 Lines 6-7	The applicant's purpose for the proposed project is to interconnect and deliver up to 1,400 megawatts (MW) of solar renewable energy that is expected to be developed in the Ivanpah Valley area. The existing Eldorado Substation and regional transmission lines cannot accommodate the additional power that would be generated by the anticipated ~~solar~~ renewable projects in the Ivanpah Valley. The applicant has proposed to construct the EITP to connect planned renewable energy sources to the CAISO-controlled transmission grid.	Consider clarifying that other types of renewable energy may interconnect to the Eldorado-Ivanpah Transmission Project.
3.	Executive Summary	ES-2 Lines 18-20	Reliably interconnect new ~~solar~~ renewable generation resources (including but not limited new solar generation), in the Ivanpah Valley area and help the applicant and other California utilities comply with the California Renewables Portfolio Standard (RPS) in an expedited manner;	Consider clarifying that other types of renewable energy may interconnect to the Eldorado-Ivanpah Transmission Project.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
4.	Executive Summary	ES-2 Lines 45-47	To connect renewable energy sources in the Ivanpah Valley area, including but not limited to solar generation, in compliance with Executive Order 13212, the Energy Policy Act of 2005, the Federal Power Act, California Senate Bill 1078, and California Senate Bill 107;	Consider clarifying that other types of renewable energy may interconnect to the Eldorado-Ivanpah Transmission Project.
5.	Executive Summary	ES-3 Lines 9-14	**Eldorado–Ivanpah Transmission Line –** A new double-circuit 230-kilovolt (kV) transmission line, approximately 35 miles long, would be constructed between the existing Eldorado Substation in Nevada and the proposed Ivanpah Substation in California. It would replace ~~a~~ the portion of the existing 115-kV transmission line that runs from Eldorado through Mountain Pass, Baker, ~~Cool Water,~~ and Dunn Siding to Cool Water. ~~Mountain Pass.~~	Please update the language to correctly describe routing connectivity of the existing Eldorado-Baker-Cool Water-Dunn Siding-Mountain Pass 115 kV line.
6.	Executive Summary	ES-3 Lines 15-18	**Subtransmission Line –** A proposed 600- to 800-foot-long ~~addition to an existing~~ 115-kV subtransmission line would be required to terminate the remaining portion of ~~from a connection point on~~ the existing Eldorado -Baker-Cool Water-Dunn Siding- Mountain Pass 115 kV line ~~would connect~~ to the proposed Ivanpah Substation ~~to the existing 115-kV subtransmission system~~.	Please update the language to correctly define the purpose of the 600- to 800-foot-long 115 kV line.
7.	Executive Summary	ES-3 Lines 9-14	**Eldorado–Ivanpah Transmission Line –** A new double-circuit 230-kV transmission line, approximately 35 miles long, would be constructed between the existing Eldorado Substation in Nevada and the proposed Ivanpah Substation in California. It would replace a portion of the existing 115-kV transmission line that runs from Eldorado through Baker, Cool Water, and Dunn Siding to Mountain Pass. ~~The existing 115-kV transmission line that runs west of the proposed Ivanpah Substation to Mountain Pass Substation would remain unchanged.~~	Please revise as noted to clarify subtransmission line elements.
8.	Executive Summary	ES-3 Lines 9-14	**Subtransmission Line –** A proposed 600- to 800-foot-long addition to an existing 115-kV subtransmission line from a connection point on the existing Eldorado–Baker–Cool Water–Dunn Siding–	Please revise as noted to clarify subtransmission line elements.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
			Mountain Pass 115-kV line would connect the proposed Ivanpah Substation to the existing 115-kV subtransmission system. Seven existing H-frame lattice structures would be removed and replaced with one TSP and six lightweight steel (LWS) H-frames. Six additional LWS H-frames would be installed between these structures.	
9.	Executive Summary	ES-3 Lines 19-22	- ~~**Distribution Lines** – A 1-mile extension of the existing Nipton 33-kV distribution line would be constructed with underground circuitry to provide light and auxiliary power to the proposed Ivanpah Substation. In addition, a new 4,300-foot segment from the existing Nipton 12-kV distribution line would be built to provide power to a proposed microwave telecommunications site.~~ - **Nipton 33 kV distribution circuit –** Close the loop by installing approximately 4800 of new underground facilities and approximately 1600 feet of new overhead facilities. Install approximately 400 feet of new underground facilities for Ivanpah Station Light and Power. Install approximately 4300 feet of new overhead facilities and provide an underground service to a proposed microwave telecommunications site.	Please add the revised description of distribution lines to better describe the 33kV system. Please delete references to the 12kV system. This provides a more precise breakdown of overhead vs. underground and distance.
10.	Executive Summary	ES-3 Lines24-26	**Ivanpah Substation –** The proposed substation would be located in California near Primm, Nevada, and would serve as a connector hub for ~~solar energy generated~~ new generation in the Ivanpah Valley area, the vast majority of which will be renewable. The substation would include a mechanical and electrical equipment room (MEER) and microwave tower.	Consider clarifying that other types of renewable energy may interconnect to the Eldorado-Ivanpah Transmission Project.
11.	Executive Summary	ES-8 Line 44-50	This EIR/EIS, therefore, analyzes the EITP (including the transmission upgrade, the substation, and the telecommunication system and alternatives) but includes a summary of the ISEGS project's design	Please clarify that the California Public Utility Commission is the California agency charged with regulatory authority over SCE, an independently owned utility. Therefore, California Energy Commission does not have jurisdiction to impose

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			and environmental impacts, as disclosed in the November 2009 ISEGS FSA/DEIS. Within Chapter 2, "Project Description," and within each resource section in Chapter 3, "Environmental Analysis / Environmental Effects," the summary of ISEGS' environmental impacts is intended for both disclosure and to assist agency decision-makers. The Whole of the Action / Cumulative Action sections do not include a new analysis of impacts but rather a synopsis of the CEC's and the BLM's determinations.	mitigation on SCE.
12.	Executive Summary Table ES-3 APM BIO-12	ES-14	The applicant would consult with the BLM, USFWS, and NDOW regarding conservation measures to avoid impacts on desert bighorn sheep during construction. Project areas with the potential to impact bighorn sheep include the proposed transmission line route through the McCullough Mountains and the telecommunication route segment in the southern Eldorado Valley between the Highland Range and the Southern McCullough Mountains. Avoidance and minimization measures could include such elements as preconstruction surveys, biological monitoring, and timing construction activities to avoid bighorn sheep active seasons. ~~Construction requiring the use of helicopters would be conducted outside of bighorn lambing season (April through October) and the dry summer months when bighorn may need to access artificial water sources north of the propose route in the McCullough Mountains (June through September).~~	Please consider striking sentence per comment #16.
13.	Executive Summary Table ES-3 APM BIO-14	ES-15	Injuries to Gila monsters may occur during excavation, ~~blasting~~, road grading, or other construction activities. In the event a Gila monster is injured, it should be transferred to a veterinarian proficient in reptile medicine for evaluation of	Please clarify as no blasting would occur for the EITP.

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			appropriate treatment. Rehabilitation or euthanasia expenses would not be covered by NDOW. However, NDOW would be immediately notified during normal business hours. If an animal is killed or found dead, the carcass would be immediately frozen and transferred to NDOW with a complete written description of the discovery and circumstances, habitat, and mapped location.	
14.	Executive Summary Table ES-4	ES-25	Impact AES-1: NEPA Summary Of the eight KOP's evaluated, ~~seved~~ all would conform with the established VRM or VRI classes ~~and one would not conform~~	Please revise as shown. The analysis in the Aesthetics chapter makes an erroneous finding of a significant impact in the VRM II area visible from KOP 1. This finding is not supported by the analysis summarized on the BLM rating form for KOP 1 presented in Appendix C, which indicates that the visual contrast of the Project in the VRM II portion of the view would be "weak" and would thus be consistent with the VRM II objectives.
15.	Executive Summary Table ES-4	ES-25	Impact AES-2: Summary of Impact The proposed project would not conflict with VRM or VRI objectives for one any of the eight Key Observation Points (KOPs).	As noted above, the attribution of an inconsistency of the Project with the VRM II area visible in the view from KOP 1 is erroneous.
16.	Executive Summary Table ES-4	ES-25	Impact AES-2: CEQA Summary of Impact Less than significant without mitigation.	Because there are no impacts that are significant for the reasons noted above, no mitigation is required.
17.	Executive Summary Table ES-4	ES-25	**Table ES-4, Impact AES-1, NEPA Summary, (O&M)** Of the eight KOP's evaluated, ~~seved~~ all would conform with the established VRM or VRI classes ~~and one would not conform~~	Please revise this statement to reflect corrected analysis. This summary statement needs to be changed. It is based on the conclusion stated in the text of the Aesthetics chapter that the Project would have a significant impact on the portion of the view seen from KOP 1 that has a VRM II classification. The conclusions summarized in the text of this chapter are based on the analyses of project impact conducted using the Bureau of Land Management visual impact assessment system that are documented on the BLM

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
				rating forms that appear in Appendix C. Close review of the BLM rating form for KOP in Appendix C reveals that the finding of a significant impact indicated in the text diverges from the analysis results reached through application of the BLM impact assessment system and documented on the BLM rating form. The analysis on the rating form indicates that the Project's contrast with the VRM II portion of the view seen from KOP 1 would be "weak", which is a contrast level that, according to BLM standards, is consistent with the VRM II objectives. It is easy to understand how an error would have been made in transferring the findings from the BLM rating forms to the text. Each of the rating forms has a page at the end on which the proposed project's contrast with the form, line, color, and texture of the setting is evaluated. The form for KOP 1 is different from the forms for the other KOPs in that because the KOP 1 view contains areas that lie within two different VRM classes, it has an extra page on which the project's contrast with the second VRM class (in this case, VRM II) is evaluated. It appears that at the time the impact text related to KOP 1 was developed, the second page was overlooked, and the determination was made that the contrast rating for the VRM II area was "Moderate", which is the rating that appears on the first of the form's two pages providing contrast ratings, but which pertains to the VRM III portion of the view.
18.	Executive Summary Table ES-4	ES-25	**Impact AES-2: Summary of Impact** The proposed project would not conflict with VRM or VRI objectives for ~~one~~ any of the eight Key Observation Points (KOPs).	As noted above, the attribution of an inconsistency of the Project with the VRM II area visible in the view from KOP 1 reflects an oversight in which the analysis on the BLM contrast rating form related to the contrast for the VRM III area was applied rather than the contrast rating for the VRM II area that was presented on the page that followed.
19.	Executive Summary	ES-25	**Impact AES-2: CEQA Summary of Impact**	Because there are no impacts that are significant for

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
	Table ES-4		Less than significant without mitigation.	the reasons noted above, no mitigation is required.
20.	Exec Summary Table ES-4	ES-31	**IMPACT CR-1:** Impacts to Cultural Resources 36-10315 (CA-SBR-10315H) ~~and 36-7694 (CA-SBR-7694H/26CK4957~~	The LADWP Boulder Transmission Line will not be directly impacted by construction. Indirect effects may occur if the setting of the line was altered by the Undertaking. The EITP, however, being a transmission project within an existing transmission right-of-way, will not alter the setting of the LADWP Line.
21.	Exec Summary Table ES-4	ES-31	**Construction:** Direct, adverse, and permanent impact to Cultural Resources 36-10315 (CA-SBR-10315H) ~~and 36-7694 (CA-SBR-7694H)/26CK4957.~~	The LADWP Boulder Transmission Line will not be directly impacted by construction. Indirect effects may occur if the setting of the line was altered by the Undertaking. The EITP, however, being a transmission project within an existing transmission right-of-way, will not alter the setting of the LADWP Line.
22.	Executive Summary Table ES-4	ES-34	APM HAZ-2: Hazardous Materials and Waste Handling Management Plan	Please revise as suggested.
23.	Executive Summary Table ES-4	ES-35	APM HAZ-2: Hazardous Materials and Waste Handling Management Plan	Please revise as suggested.
24.	Executive Summary	ES-43	**APM TRA-1:** Obtain Permits	IMPACT TRANS-1 "Summary of Impact" identifies APM TRA-1 to be implemented to reduce impacts associated with construction traffic. Thus, APM TRA-1 should be identified in the "Applicant Proposed Measures" column of the Table ES-4.
25.	Executive Summary	ES-43	**MM TRANS-2:** Helicopter Flight Plan and Safety Plan	IMPACT TRANS-1 "Summary of Impact" identifies MM TRANS-1 to be implemented to reduce impacts associated with construction traffic. Thus, MM TRANS-1 should be identified in the "Mitigation Measures" column of Table ES-4.
26.	Executive Summary	ES-43	**MM HAZ-2:** Consultation with FAA Regarding Final Project Design and Possible Hazard/No Hazard Determination	IMPACT TRANS-1 "Summary of Impact" identifies MM HAZ-2 to be implemented to reduce impacts associated with potential air traffic conflicts. Thus, MM HAZ-2 should be identified in the "Mitigation Measures" column of Table ES-4.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
27.	Executive Summary	ES-43	**APM TRA-1:** Obtain Permits **APM TRA-2:** Traffic Management and Control Plans **APM TRA-3:** Minimize Street Use	IMPACT TRANS-3 "Summary of Impact" indentifies APMs TRA-1, TRA-2, and TRA-3 to be implemented to reduce emergency access impacts. Thus, these APMs should also be indentified in the "Applicant Proposed Measures" column of the Table ES-4.

EITP DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT
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COMMENTS & SUGGESTED REVISIONS

Section 1: Introduction

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	1.1.2 Table 1-1	1-5	~~CAISO Queue #126 Wind 1,500 MW Eldorado~~	Please remove CAISO Queue #126 from Table 1-1. CAISO Queue #126 requested interconnection to the Eldorado Substation but a different Method of Service for this project has been developed given the project size and geographical location. Consequently, the project does not rely on facilities being constructed as part of EITP.
2.	1.1.2 Table 1-1	1-5	**CAISO Queue Position Type Size MW Area of Interconnection** CAISO Queue #131 Solar-Thermal 114 Ivanpah 115-kV Substation CAISO Queue #162 Solar-Thermal 100 Ivanpah 115-kV Substation CAISO Queue #233 Solar-Thermal 200 Ivanpah 230 115-kV Substation **Total Continuing Under LGIP Serial Approach: 1,700 414 MW**	Please update Table 1-1 to reflect appropriate projects continuing forward under the LGIP "Serial Approach". Note that these three projects collectively make up the ISEGS Project (Docket 07-AFC-05).
3.	1.1.2 Table 1-1	1-5	**CAISO Queue Position Type Size MW Area of Interconnection** CAISO Queue #163 Solar Photovoltaic 300 Ivanpah 230-kV Substation CAISO Queue #205 Solar-Photovoltaic Thermal 300 Eldorado 220-kV Switchyard CAISO Queue #467 Solar-Photovoltaic Thermal 230 Eldorado-Ivanpah 230-kV Line	Please update Table 1-1 to reflect appropriate projects and technology continuing under the Transitional Queue Cluster.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
			Total Continuing Under Transitional Queue Cluster Approach: 2,418 <u>530 MW</u>	
4.	1.1.2 Table 1-1	1-5	**CAISO Queue Position** **Type** **Size MW** **Area of Interconnection** CAISO Queue #488 Solar-PhotovoltaicThermal 92 Eldorado 220-kV Switchyard CAISO Queue #497 Solar-Thermal 6 Ivanpah 115-kV Substation CAISO Queue #498 Solar-Thermal 20 Ivanpah 115-kV Substation CAISO Queue #499 Solar-Thermal 40 Ivanpah 115-kV Substation CAISO Queue #500 Solar-Thermal 960 Eldorado 500-kV Substation CAISO Queue #502 Solar-Photovoltaic 270 Eldorado-Ivanpah 230-kV Line CAISO Queue #503 Solar-Photovoltaic 500 Eldorado-Ivanpah 230-kV Bus **<u>Total Continuing Under New Queue Cluster Approach: 336 MW</u>**	Please update Table 1-1 to create a third section, New Queue Cluster Approach.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
5.	1.1.2.1	1-6	The BLM has determined that the ISEGS project and the EITP are not "connected" actions because it is not the case that each depends on the other. As contemplated in Section 2.3.5 ("No Project/No Action Alternative") and Section 6.3.2 ("Provisions for Additional Electric Power"), ISEGS at full build out could develop an alternative method to interconnect to the grid with other utilities in the area. ~~While the ISEGS project at full build-out would depend on the EITP because the existing transmission line (without the EITP proposed line and substation upgrades) would provide insufficient transmission capacity for the power generated by all phases of the ISEGS project,~~ In addition, t~~T~~he EITP would not depend on the ISEGS project. BLM has received a number of applications for additional power generation projects in both California and Nevada that could tie into the EITP, including those listed in Table 1-1, below. Therefore, ~~the EITP is needed for planned~~ there is sufficient potential renewable development in the Ivanpah Valley area to support the need for EITP even if the ISEGS project is not constructed.	Consider revising to reflect that ISEGS at full build out has other options for interconnecting to the grid in the event that EITP is not constructed as contemplated in Section 2.3.5 and Section 6.3.2. *See* EITP Draft EIR/EIS at Section 2.3.5 at p. 2-60 (explaining that if EITP "is not developed but the planned renewable generation facilities are developed, an alternative method for connecting renewable generation facilities in the Ivanpah Valley area would need to be developed. It is possible that other electrical utilities with transmission facilities in the area, such as LADWP, might purchase some of the power from the developers and integrate the electricity into its system. Another possibility is the development of a private transmission line, which would connect renewable generation projects to the grid."); Section 6.3.2 at p. 6-9 (stating that "if the EITP is not constructed, it is assumed that the proposed renewable power generation projects that the EITP would be intended to serve would still proceed. These renewable power projects would need alternate means to connect to electrical transmission systems. SCE or other electrical transmission companies that currently serve the Ivanpah Valley region would be likely candidates for providing electrical transmission projects if the EITP was not constructed.").
6.	1.2.1	1-8 Lines 9-11	SCE's ~~The~~ existing facilities at Eldorado Substation and existing Eldorado-Baker-Cool Water-Dunn Siding-Mountain Pass 115-kV regional transmission lines cannot accommodate the additional power that would be generated by the anticipated ~~solar~~ renewable projects in the Ivanpah Valley.	Please update the language to correctly describe system limitations. Please note that other types of generation may also interconnect to EITP in addition to solar projects.

EITP DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT
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Section 2: Description of Project and Alternatives

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	All Sections		Identify "33-kV Distribution Line & Microwave Site", instead of "~~12 kV~~ Distribution Line & Microwave Site."	Please make global correction to all applicable figures/maps.
2.	All Sections/Maps		See item #3 above Global change "~~Nevada Power~~" should be "NV Energy"	Nevada Power has merged and is now named "NV Energy."
3.	2.1.1.2	2-5 Line 13	Tubular Steel Poles (TSPs), which are hollow steel poles consisting of ~~one or~~ two or more ~~pieces~~ sections ~~welded~~ slip-jointed together.	Please modify as suggested. Depending on the height of the structure, there can be more than two pieces. Sections are slip-jointed together instead of welded together.
4.	2.1.1.2	2-5 Line 44	Transmission structures can be designed to support either single circuits or double circuits. Single-circuit structures support one circuit containing three phases ~~are typically used for voltages up to 200 kV and can help reduce unwanted side effects such as noise and radio interference~~ (Figures 2-5 and 2-8). Double-circuit structures support two circuits, each circuit consisting of three phases. Each phase ~~typically~~ may consist~~s~~ of two or more conductors, to increase the line's capacity ~~for voltages over 200 kV~~ (Figure 2-4).	Please modify as suggested. There is no data to support reduction of noise and radio interference. Please note that single or double circuits can be below or above 200-kV.
5.	2.2.1.1	2-6 Lines 19-24	**Eldorado–Ivanpah Transmission Line –** A new double-circuit 230-kV transmission line, approximately 35 miles long, would be constructed between the existing Eldorado Substation in Nevada and the proposed Ivanpah Substation in California. It would replace a portion of the existing 115-kV transmission line that runs from Eldorado through Baker, Cool Water, and Dunn Siding to Mountain Pass. ~~The existing 115-kV transmission line that runs west of the proposed Ivanpah Substation to Mountain Pass Substation would remain unchanged.~~	Please revise as noted to clarify subtransmission line elements. The existing 115-kV transmission line that runs west of the proposed Ivanpah Substation to Mountain Pass Substation would remain unchanged because it is not part of the project and thus does not need to be included.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
6.	2.2.1.1	2-6 Line 21	It would replace ~~a~~ the portion of the existing 115-kV transmission line that runs from Eldorado through Mountain Pass, Baker, ~~Cool Water,~~ and Dunn Siding to Cool Water. ~~Mountain Pass.~~	Please update the language to correctly describe routing connectivity of the existing Eldorado-Baker-Cool Water-Dunn Siding- Mountain Pass 115-kV line.
7.	2.2.1.1	2-6 Lines 21-22	It would replace a portion of the existing 115-kV transmission line that runs from Eldorado to Mountain Pass to Baker to Dunn Siding to Cool Water. through Baker, Cool Water, and Dunn Siding to Mountain Pass.	Please revise to reflect correct naming conventions.
8.	2.2.1.1	2-6 Line 25	A proposed 600- to 800-foot-long ~~addition to an existing~~ 115-kV subtransmission line will be required to terminate the remaining portion of ~~from a connection point on~~ the existing Eldorado-Baker-Cool Water-Dunn Siding-Mountain Pass 115-kV line ~~would connect~~ to the proposed Ivanpah Substation ~~to the existing 115-kV subtransmission system~~.	Please update the language to correctly define the purpose of the 600- to 800-foot-long 115-kV line.
9.	2.2.1.1	2-6 Lines 25-28	**Subtransmission Line –** A proposed 600- to 800-foot-long addition to an existing 115-kV subtransmission line from a connection point on the existing Eldorado–Baker–Cool Water–Dunn Siding–Mountain Pass 115-kV line would connect the proposed Ivanpah Substation to the existing 115-kV subtransmission system. Seven existing H-frame lattice structures would be removed and replaced with one TSP and six lightweight steel (LWS) H-frames. Six additional LWS H-frames would be installed between these structures.	Please revise as noted to clarify subtransmission line elements.
10.	2.2.1.1	2-6 Lines 29-32	- **Distribution Lines –** A 1-mile extension of the existing Nipton 33-kV distribution line would be constructed with underground circuitry to provide light and auxiliary power to the proposed Ivanpah Substation. In addition, a new 4,300-foot segment from the existing Nipton ~~12 kV~~ 33-kV distribution line would be built to provide power to a proposed microwave telecommunications site.	The Nipton distribution line is a 33-kV line.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
11.	2.2.1.1	2-6 Lines 29-32	~~- **Distribution Lines** – A 1-mile extension of the existing Nipton 33-kV distribution line would be constructed with underground circuitry to provide light and auxiliary power to the proposed Ivanpah Substation. In addition, a new 4,300-foot segment from the existing Nipton 12-kV distribution line would be built to provide power to a proposed microwave telecommunications site.~~ - **Nipton 33 kV distribution circuit –** Close the loop by installing approximately 4800 of new underground facilities and approximately 1600 feet of new overhead facilities. Install approximately 400 feet of new underground facilities for Ivanpah Station Light and Power. Install approximately 4300 feet of new overhead facilities and provide an underground service to a proposed microwave telecommunications site.	Please add the revised description of distribution lines to better describe the 33-kV system. Please delete references to the 12-kV system. This provides a more precise breakdown of overhead vs. underground and distance. Note, that is likely better to provide a 33-kV line extension instead of a 12-kV line extension from Calcadia PT.
12.	2.2.1.1 Figure 2-3	2-7	Identify "33-kV Distribution Line & Microwave Site", instead of "~~12-kV~~ Distribution Line & Microwave Site."	Please make correction.
13.	2.2.1.1 Table 2.1	2-9	Path 2, Section 2 (underground) California; ~~4.8~~ 3 miles; Nevada 2 miles	Path 2 Section 2 has about 2 miles underground fiber-optic cable in Nevada, and about 3 miles underground cable in California.
14.	2.2.1.1 Table 2.1	2-9	Communication facilities: • Telecommunication facilities at Eldorado Substation • Communication Room (MEER) at Ivanpah Substation • Telecommunication facility at Nipton MW Communication site	Please include the Nipton MW Communication site to Table 2-1.
15.	2.2.1.1 Table 2-1	2-9	"Features" Column: Single-circuit 115-kV line to terminate the remaining portion of the existing Eldorado-Baker-Cool Water-Dunn Siding-Mountain Pass 115-kV line to ~~connecting~~ the Ivanpah Substation~~ to the existing system~~.	Please update the language to correctly define the purpose of the 600- to 800-foot-long 115-kV line.

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16.	2.2.1.1. Table 2-1	2-9	Revise distribution portion of the table to match the text below: Single-circuit 33-kV ~~and 12-kV~~ lines to provide power to Ivanpah Substation California; 33-kV line: ~~1 mile 12-kV line: 4,300 ft~~ approximately 5200 ft of underground and 5900 ft of overhead	Please revise text as shown.
17.	2.2.1.1 Table 2-1	2-9	Table 2-1 Summary of EITP Components – Microwave Facility in the town of Nipton – Add Components:	Please add a description of the microwave facility.
18.	2.2.1.1 Table 2.1	2-9	**Eldorado Substation Upgrades** Extension of the existing ~~yard~~ switchyard to install two 230-kV line positions to accommodate the new double-circuit line.	Please change to "switchyard." The interpretation of "yard" may be mistaken for an expansion of the facility beyond the existing fence.
19.	2.2.1.2	2-10 Line 25	NV Energy ~~Nevada Power Powerline (115 kV)~~ Arden-Higgins 1&2 (230-kV)	The voltage line is 230-kV and is called the Arden-Higgins 1&2 line. Please modify as suggested. Please clarify Map Figure 2-3b also to specify the correct voltage and name.
20.	2.2.1.2	2-10 Line 31	The applicant's studies indicate that the capacity of the existing 115-kV line is limited to a maximum ~~output~~ loading of 80 MW.	Please update the language to articulate that lines are not output limited but rather thermal limited (i.e., loading limited).
21.	2.2.1.2	2-10 Line 42	These widened ROW areas would be mainly required for five major utility transmission line crossings below existing LADWP and NV Energy transmission lines.	Please modify as suggested. The NV Energy transmission line is also crossed.
22.	2.2.1.3	2-12 Line 1	The line would continue southwest for approximately 13 miles (MPs 24 and 25) before new additional utility crossings, at LADWP's McCullough–Victorville No. 1 and No. 2 500-kV transmission lines, the NV Energy ~~Nevada Power 115-kV~~ Arden-Higgins 1&2 230-kV transmission line, and ~~the applicant's~~ LADWP's Mead–Victorville 287-kV transmission line.	The NV Energy line is a 230-kV transmission line and is called Arden-Higgins 1&2. The Mead-Victorville 287-kV line belongs to LADWP, not the applicant. Please modify as suggested.
23.	2.2.1.3	2-12 Line 1	The line would continue southwest for approximately 13 miles… and ~~the applicant's~~ LADWP's Mead-Victorville 287-kV transmission line.	Please update the ownership to the Mead-Victorville 287-kV transmission line to be LADWP.
24.	2.2.1.3	2-12	Transmission Structures and Lines The proposed EITP 230-kV transmission line would consist	Please modify as suggested. The cable diameter is approximately 1.5 inches in diameter.

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		Line 16	of 258 galvanized transmission structures that would support a double-circuit transmission line (two arrays of conductors) at the top. Each circuit would be composed of three phases (three separate cables), each phase consisting of two conductors with a cross section of 1,590 kilo circular mils (kcmil).~~;~~ ~~a~~ A ~~circular area with an~~ 1,590 kcmil conductor is approximately ~~1.26 inch~~ 1.5-inch in diameter).[1]	
25.	2.2.1.3	2-12 Lines 21-23	In addition, the proposed transmission structures would ~~have~~ include polymer insulators and an optical ground wire ~~and suspended single polymer insulators~~ installed at the top, to provide protection and to support telecommunication.	Please revise as noted.
26.	2.2.1.3	Figure 2-3a maps on pages 2-13, 2-15, 2-17, 2-19, 2-21	Re-label Highway "5" to "15" – main map and map insets.	The maps' highway identifier is mislabeled – designation is Hwy 15.
27.	2.2.1.3 Figure 2-3a (map 3 of 5)	2-17	Add natural gas pipeline text and symbol to map legend.	Pipeline is presented on map but not reflected in map legend.
28.	2.2.1.3 Figure 2-6	2-27	The wire stringing tension sites for the 115-kV conductor string are labeled incorrectly. Please change the color of the wire stringing tension sites from red to yellow. The three larger rectangles southwest of the Ivanpah Substation site are wire stringing tension sites not pull sites.	Please revise the figure as noted.
29.	2.2.1.3	2-29	Figure 2.7: Spacing between arms should be 11' spacing between arms, not 8'	Please revise this to be consistent with SCE Transmission Overhead Design Manual.
30.	2.2.1.3	2-30 Lines 1-2	The existing conductors would be removed and replaced with approximately 654 Aluminum Conductor Steel Reinforced (ACRS) conductor with two 4/0 ACSR 3/8-inch high-strength galvanized shield wires.	Please add clarification.
31.	2.2.1.3	2-30 Lines 7-11	Additional 33-kV distribution circuitry would be constructed to provide auxiliary power to the Ivanpah Substation. The station light and power would be served from approximately 400 feet of new ducts and one run of	Please revise to clarify station light and power description and add the 400 feet of new duct and cables and clarification of the distribution of the approximate 1-mile segment of circuitry.

[1] A circular mil (cmil) is a standard unit used in electrical systems for referring to the area of the cross section of larger conductor sizes. A mil is 0.001 inch. One cmil is equal to the area of a circle with a 1 mil diameter (Blume 2007). One kcmil is equal to one thousand cmils.

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			cable from the existing Nipton 33-kV circuit. Also, approximately 4,800 feet of new underground and approximately 1,600 feet of new overhead 33-kV circuitry and two new Remote Control Switches that would be installed adjacent to Densmore Drive at the California state line, near Primm, Nevada to improve the reliability of the circuitry serving the new Ivanpah Substation station light and power. ~~A 33-kV distribution line would be installed to provide reliable lighting and power service to the new Ivanpah Substation. This component would consist of approximately 1 mile of new underground 33-kV circuitry and two new Remote Control Switches that would be installed adjacent to Densmore Drive at the California state line, near Primm, Nevada.~~ One of the switches would be located south of the Ivanpah Substation and the second would be located near the Primm Valley Golf Club's Desert Course.	
32.	2.2.1.3	2-30 Lines 7-16	A 33-kV distribution line would be installed to provide reliable lighting and power service to the new Ivanpah Substation. This component would consist of approximately 1 mile of new underground 33-kV circuitry and two new Remote Control Switches that would be installed adjacent to Densmore Drive at the California state line, near Primm, Nevada. One of the switches would be located south of the Ivanpah Substation and the second would be located next to the Primm Valley Golf Club's Desert Course. In addition, approximately 4,300 feet of a new 33~~12~~-kV overhead line would be installed between the town of Nipton and the new microwave site proposed to be located northeast of Nipton. A transformer would be installed on this overhead line connecting to the microwave site using an underground duct. The line would be installed along the side of an existing unnamed dirt road.	Please revise text as shown.
33.	2.2.1.3	2-30 Lines 30-3 (Insert)	~~Approximately 1.2 miles of new spur roads would be required for the proposed project route, disturbing approximately 2.1 acres.~~ Approximately 1.7 miles of new permanent spur roads and	Please update the mileage as indicated. A new down-line access road was identified during a field visit.

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			1.2 miles of new access roads would be required for the proposed project, disturbing approximately 4.9 acres.	
34.	2.2.1.3	2-31	Installation of the two positions would require that the existing 230-kV switchyard be extended ~~165 feet~~ to the west within the existing substation fence.	Please remove the amount of extension to the west as the exact amount of extension will not be known until final engineering is performed.
35.	2.2.1.3	2-31 Lines 4-9	**Substations** **Ivanpah Substation** The proposed 230/115-kV Ivanpah Substation would be located 6.1 miles west of the California-Nevada border. The proposed substation site (Figure 2-9) area would be approximately 1,650 by 1,015 feet (38.5 acres), located within the proposed Ivanpah Solar Generating System (ISEGS) project area (see Section 2.2.2) and would consist of a 885-by-850-foot fenced area containing the transformer banks and lines 10-foot perimeter buffer surrounding the transformer banks, and two 1,015-by-400-foot areas (9 acres each) containing cut and fill slopes, protective drainage improvements and substation access for all transmission lines ~~that~~ would flank the fenced area on the east and west.	Please revise text as shown.
36.	2.2.1.3	2-31 Lines 13-16	The initial configuration would include ~~three~~ two 280-MVA 230/115-kV transformer banks, ~~five~~ three 230-kV and four 115-kV lines, and associated switchracks. The final substation configuration would be designed to include up to four 280-MVA 230/115 kV transformer banks, up to eight 230-kV lines, and up to fourteen 115-kV lines.	Please revise to reflect current CAISO recommendations. Consider including flexibility for unknown future conditions.
37.	2.2.1.3	2-31 Lines 18-20	In addition, a 24-foot-wide paved road, fencing, areas for future 115-kV and 230-kV switchrack and capacitor banks, ~~and an emergency generator~~ would be installed as part of the Ivanpah Substation facility. A 180-foot microwave tower and 65-by-55-foot MEER would also be installed in the southern central area of the substation site.	An emergency generator would not be required at Ivanpah Substation.
38.	2.2.1.3	2-31 Lines 19-20	A 180-foot microwave tower and 65-by-55-foot MEER would also be installed within the ~~southern central area of~~ substation site.	Please consider the following. The final electrical plot plan has not been fully devised and the MEER may be located in a different part of the station. The final location for MEER and microwave tower will not be known until final engineering.

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39.	2.2.1.3	2-32 Lines 42-46	At the Ivanpah Substation, another microwave tower (also approximately 180 feet tall) would be built to link to the Nipton microwave tower. In addition, 4,300 linear feet of the 33~~12~~-kV overhead distribution line would be extended from the existing 33~~12~~-kV Nipton line ROW to the proposed microwave site to provide electrical service. The applicant anticipates that only one pole with conductor span would need to be replaced.	Please revise text as shown.
40.	2.2.1.3 Figure 2-9	2-33	Figure 2-9 Substation Layout.	Due to Critical Energy Infrastructure Information (CEII) considerations, Figure 2-9 should be replaced with Figure 3.5-1 of SCE's Proponents Environmental Assessment (PEA).
41.	2.2.2.3	2-39 Lines 19-20	The fiber cable would be installed on the existing 12-kV/33-kV distribution line poles.	The distribution line poles are both 33-kV and 12-kV
42.	2.3.2.2	2-52 Lines 10-13	**Telecommunication Alternative (Golf Course)** The Golf Course Telecommunication Alternative route would extend from Nipton to the point on the north side of Nipton Road where it intersects with I-15. This alternative would consist of a combination of all-dielectric self-supporting fiber cable installed on existing Nipton 33-kV wooden distribution pole lines and underground fiber optic cable in new duct banks (Figure 2-13).	Please insert clarifying text.
43.		2-52 Lines 31-33	**Telecommunication Alternative (Mountain Pass)** The Mountain Pass Telecommunication Alternative route would extend from Nipton to the point on the north side of Nipton Road where it intersects with I-15. This alternative would consist of all-dielectric self-supporting fiber cable installed on existing Nipton 33-kV wooden distribution pole lines and underground fiber optic cable in new duct banks (Figure 2-14).	Please insert clarifying text.
44.	2.3.3	2-61	230-kV Single-Circuit Transmission Line This alternative would not meet the project purpose and need. It would only provide capacity for interconnecting a maximum amount of ~~1,500~~ 1,150 MW provided no additional system limitations result such as overload of the remaining 115-kV line portion of the existing Eldorado-Baker-Cool Water-Dunn Siding- Mountain Pass 115-kV	Please correct the maximum amount of generation that can be potentially accommodated with a single circuit 230-kV line.

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			line.	
45.	2.3.3	2-61 Lines 40-41	This alternative would not meet the project purpose and need. It would only provide capacity for interconnecting a maximum of ~~1,500~~ 1,400 MW. It would not meet the purpose and need of providing transmission capacity of 1,400 MW.	Please revise statement as noted.
46.	2.3.3	2-62 Lines 7-8	The use of multiple microwave towers for telecommunications would avoid the use of overhead or underground ~~wires~~ fiber optic cable, reducing the potential for visual impacts compared with the proposed project.	Please edit "wires" to "fiber optic cable".
47.	2.4	2-63 Line 30	Pre-construction activities include surveys, clearing, grading, and other site preparation activities and access and spur road works, as well as dismantling of existing facilities such as transmission line structures, transmission hardware, conductors, overhead ground wires, and transformer banks.	Please revise as shown.
48.	2.4.1	2-64 Line 13	• Establishing approximately seven construction yards and two helicopter staging areas	Please revise as noted to maintain consistency with line 38 (same page).
49.	2.4.1	2-64 Line 38-41	Project construction would begin with establishment of approximately seven temporary construction yards and two helicopter ~~landing sites~~ fly yards located at strategic points along the route. Two construction yards would be in California and five in Nevada. The proposed location and current condition of each yard and landing site are listed in Table 2-9. The applicant or its contractors might use additional construction yards.	Please note that these are the main helicopter staging areas so they shouldn't be considered "landing sites". Terminology consistent with past projects.
50.	2.4.1 Table 2-9	2-65	Table 2-9: Replace "HL1" and "HL2" with FY1 and FY2.	Please revise so that the terminology is consistent with prior comment. Please revise to reflect change to "fly yard." Revised table attached.
51.	2.4.1	2-65	Table 2-9: Change area for HL1 from 3.6 to 5.0 acres.	Please revise table to be consistent with the information provided in the Helicopter Plan. Revised table attached.

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52.	2.4.1 Table 2-9	2-65	Table 2-9: Replace "HL" in footnote section with FY = Helicopter Fly Yard.	Please revise so that the terminology is consistent with prior comment. Please revise to reflect change to "fly yard." Revised table attached.
53.	2.4.1 Table 2-9	2-65	Helicopter Fly Yard -1 (East of McCollough Pass) Helicopter Fly Yard - 2 (West of McCollough Pass)	Please revise Table 2-9 as shown. Revised table attached.
54.	2.4.1	2-66 Line 6	• Helicopters would be mainly used during the transmission line stringing activities ~~(sock or pilot line threading)~~, as described further in this section.	Please revise as shown.
55.	2.4.1	2-66 Lines 28-35	Approximately 35 miles of existing main roads would need to be upgraded to support the proposed 230-kV line construction and operations. In addition, approximately 1.2 miles of new ~~more~~ access roads would be required for construction and maintenance of the telecommunications facilities, as well as additional access roads for connecting the project facilities to support and logistics areas, such as the road coming from Jean to the project ROW.	Please revise.
56.	2.4.1	2-66 Line 31	Additionally, ~~1.2~~ 1.7 miles of spur roads would be constructed to allow passage of construction vehicles to the construction sites.	Please revise number of spur road miles as shown.
57.	2.4.1	2-67 Line 7	• Wire-pulling locations – Wire-pulling sites ~~would~~ may be located every 15,000 feet along the existing utility corridor, and would include locations at dead-end structures and turning points.	Please revise as shown.
58.	2.4.1	2-67 Line 10	• Cable removal – A 3/8-inch pulling cable or rope line may ~~would~~ replace the old conductor as it was removed. The cable or rope would then be removed under controlled conditions to minimize ground disturbance, and all wire-pulling equipment would be removed.	Please revise as shown.

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59.	2.4.1	2-67 Line 14-17	• Structure Removal – For each type of structure, a crane truck or rough-terrain crane would be used to support the structure during removal; a crane pad of approximately 50 by 50 feet might be required to allow a removal crane to be set up at a distance of approximately 60 feet from the structure center line. ~~The crane rail would be located transversely from the structure locations.~~	Please revise as shown.
60.	2.4.1	2-67 Line 39-41	To erect either the LSTs or the steel H-frame structures, a crane pad (a flat, vegetation-free area) may need to be established within the laydown area described above. Crane pads would be located approximately 60 feet from the centerline of each structure.	Please revise as shown.
61.	2.4.1	2-68 Line 26		Please list the contact organization (in Nevada) that is similar to Underground Service Alert in California.
62.	2.4.1	2-70 Line 7	The conductors would then be pulled through ~~the length of the span~~ a series of structures by a puller machine. Another machine called a tensioner would be located at the ~~other~~ opposite end of the ~~span~~ pull, near the reel of conductor.	Please revise as noted.
63.	2.4.1	2-71 Line 1	• Erection of a highway net guard structure system or guard pole structures	Please revise as shown.
64.	2.4.1	2-71 Lines 7-8	Typical guard structures are 60-to-80-foot-tall wooden poles (and are buried 6 to 8 feet into the ground.)	Please revise as shown.
65.	2.4.1	2-72 Line 9	At a OPGW splice locations, the fiber cables are routed down a structure leg where the splicing occurs.	Please revise as noted.
66.	2.4.1	2-72 Line 24	If this condition cannot be met with ground rods, the applicant would install special counterpoise systems at the structure footings to reduce the resistance to safe levels.	Please revise as noted.
67.	2.4.2	2-72 Lines 36-38	~~During construction, water trucks would be used to minimize the quantity of airborne dust created by construction activities.~~ Any damage to existing roads as a result of construction would be repaired once construction was complete.	Please consider striking the first sentence. The damage to existing roads would likely be caused by numerous factors with water trucks having a minimal impact overall.

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68.	2.4.3	2-73 Lines 11-23	**2.4.3 Distribution Line Construction** A 33-kV distribution system would be constructed to provide auxiliary power to the Ivanpah Substation. This system would consist of approximately 4800 feet ~~1 mile~~ of new underground and approximately 1600 feet of new overhead 33-kV circuitry and two new Remote Control Switches (RCSs) that would be built to close the loop in the Nipton 33-kV circuit. The proposed work would be done next to Densmore Drive Road. One RCS would be south of Ivanpah Substation, and one would be next to the Primm Golf Course. Ivanpah Substation power would be served from approximately 400 feet of new ducts and one run of cable from the Nipton 33-kV circuit to the location of the new station light and power transformer in the Ivanpah Substation. The exact location of the transformer would be determined during final engineering. Additionally, about 4,300 feet of new 33~~12~~-kV overhead distribution line would be constructed between the town of Nipton and the new microwave site northeast of Nipton. An overhead transformer would be installed with underground service to the microwave site. The line would be installed along the side of an existing dirt road.	Please revise text as shown.
69.	2.4.4	2-73 Line 41	Suggest adding a Hazardous Materials Business Plan to sections that reference a SPCC.	A HazMat Business Plan would be needed for this project and would be submitted to CUPA (same agency as SPCC).
70.	2.4.1	2-74 Lines 3-43	**Step 2.** Pulling – The sock line would be used to pull in the conductor pulling cable. The conductor pulling cable would be attached to the transmission line conductor using a special swivel joint to prevent damage to the conductor and to allow the wire to rotate freely to prevent complications from twisting as the conductor unwinds off the reel. A piece of hardware known as a running board would be installed to properly feed the conductor into the roller; this device keeps the bundle conductor from wrapping during installation. The conductors would ~~then~~	Please revise as noted.

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			be pulled through a series of structures ~~the length of the span~~ by a puller~~r~~ing machine. Another machine called a tensioner would be located between the pulling and tensioning sites ~~at the other end of the span~~, near the reel of conductor. The puller and tensioner are operated together during the pulling phase to ensure that the conductor complies with technical specifications, such as maintaining the proper ground clearance. Conductor pulling locations could ~~would~~ occur every 15,000 to 18,000 feet on flat terrain and would be more closely spaced in rugged terrain. Wire pull locations would be selected, where possible, based on the geometry of the line as affected by changes in routing directions, changes in the terrain, and suitability of stringing and splicing equipment setups. **Step 3.** Splicing, Sagging, and Dead-ending – Once each conductor is pulled through the length of the transmission line, all temporary pulling splices would be removed and replaced with permanent splices. Conductor splices would occur every 7,500 to 9,000 feet on flat terrain or more closely in rugged terrain. Once the splicing was completed, the conductor would be sagged to proper tension. ~~to avoid effects in the conductor length due to changes in temperature (conductors expand or contract with high or low temperatures). In addition, all phases to be installed between two towers would be sagged to the same tension.~~ After splicing and sagging, the conductors would be attached to dead-end structures and the conductors would be ~~fixed~~ attached to all the suspension towers. ~~dead-end towers.~~ **Step 4.** Clipping-in and Spacers – After the conductor~~s were fixed to~~ is dead-ended ~~towers~~, the conductors would be ~~clipped in or~~ attached to all tangent structures - a process called clipping-in. ~~This process would involve removing the existing wire rollers and replacing them with final~~	

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			~~insulator hardware to secure the conductors to the insulators.~~ Once this ~~was~~ is complete, spacers would be attached between the between the bundled conductors of each phase to ~~maintain~~ keep uniform separation between each conductor.	
71.	2.4.4	2-74 Lines 38-41	**Substation equipment installation** Following the excavation and below-grade construction, installation of substation equipment and ancillary facilities, such as buses, capacitors, circuit breakers, transformers, steel structures, and the MEER would take place. The transformers would be delivered by heavy-transport vehicles and ~~off-loaded on site by large cranes with support trucks.~~ escorted by contracted traffic control. Because of their size and weight each transformer would be moved to its dedicated concrete foundation by towing it from the transport vehicle along temporary steel beams onto the foundation and lowered into place.	Please revise. These transformers are too large and heavy (~400,000 lb) to be moved by crane.
72.	2.4.4	2-75 Lines 2-4	**Rock Surfacing** All areas within the substation perimeter that were not paved or covered with concrete foundations or trenches would be covered with a 4-inch layer of untreated, ¾-inch crushed rock. ~~This crushed rock layer would provide a safe work environment in those areas of the substation not previously insulated or electrically grounded.~~	Please revise. All areas in the substation are within the ground grid.
73.	2.4.4	2-75 Lines 20-23	~~Erosion control during grading of the unfinished site and during subsequent construction would be in place and monitored as specified by the SWPPP. A siltation basin would be established to capture silt and other materials that might otherwise be carried from the site by rainwater surface runoff. Approximately 20 percent of the completed substation would consist of impervious materials such as concrete foundations and asphalt concrete paving.~~	Please consider striking as this is speculation as to what would be included in the SWPPP. Also, a siltation basin is not a typical requirement in a SWPPP.
74.	2.4.6.1 Table 2-11	2-78	Table 2-11: New Access Roads s/b 1.2 miles; 2.0; 2.0; 2.0 New Spur Roads s/b 1.7 miles; 2.9; 2.9; 2.9 Add: Helicopter Fly Yard-1 (East): 1; 5.0 Acres; 5.0; 5.0; 0 Add: Helicopter Fly Yard-2 (West): 1; 5.7 Acres; 5.7; 5.7; 0	Please update miles of road as shown in Table 2-11 in Appendix A.

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75.	2.4.6.1 Table 2-11	2-78	New Permanent Access Roads: Quantity approximately 1.2 Miles; 2.06 acres; 0 acres; 2.06 acres. New Permanent Spur Roads: Quantity approximately 1.7 Miles; 2.88 acres; 0 acres, 2.88 acres	Please update new miles of road as shown in Table 2-11 in Appendix A.
76.	2.4.6.1	2-78 Lines 19-20	Estimated total land disturbance from all the applicable proposed project components is approximately ~~466~~ 439 acres during construction, with a permanent disturbance of ~~51~~ 42 acres.	Please revise as noted.
77.	2.4.6.1 Table 2-13	2-80	Please make the following changes in Table 2-13: **Underground trench/duct for conduit (Row 1):** Each Disturbed Area (Column 3): 5200 ft x 2 ft **Underground manhole installation (Row 2):** Quantity (Column 2): 4 **Work area for underground manholes pulling area (Row 3)** Quantity (Column 2): 4 **Work area pulling of ~~3/8 mile~~ 1600 ft of 1/0 ACSR pole line construction (Row 4)**	Please revise text as shown – refer to Table 2-13 in Appendix A.
78.	2.4.6.1	2-81	Furthermore, installation of the subtransmission (115-kV) line would disturb 7.3 acres during construction and would result in a 1 acre permanent disturbance, while the proposed 33-kV distribution line segment would create a temporary disturbance of ~~0.37~~ 1.22 acres.	Please revise as shown.
79.	2.4.6.2 Table 2-15	2-82	New Permanent Access Roads: Quantity approximately 2.3 miles; 3.9 acres; 0 acres; 3.9 acres New Spur Roads: Quantity approximately 0.5 miles; 0.85 acres; 0 acres, 0.85 acres	Please update new miles of road as indicated-refer to Table 2-15 in Appendix A.

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80.	2.4.6.2	2-87	Table 2-22	Please revise to show updated summary of land disturbance as shown in Appendix A to these comments.
81.	2.4.6.2	2-87 Line 9	According to the applicant, about ~~no more than four crews would be building~~ four ~~distinct~~ transmission structures would be constructed ~~at a time~~ during a maximum period of 7 days.	Please revise as shown.
82.	2.4.7 Table 2-23	2-88	Table 2-23: 115-kV subtransmission lines: Installing lightweight steel poles Installing overhead shield wire	Please refer to attached table and revise as noted.
83.	2.4.9	2-90 Line 30	A list of structures ~~and line hardware~~ that would be removed from the existing 115-kV system to construct the proposed Eldorado-Ivanpah transmission line is given in Table 2-5.	Table 2-5 lists only structures. Please revise as noted.
84.	2.5.1	2-91 Line 25	~~Routine line washing~~	Please revise as shown because polymer insulators are being proposed, and they do not typically require routine line washing.
85.	2.7 Table 2-24	2-105	APM HAZ-2: Hazardous Materials and Waste Handling Management Plan	Please revise as suggested.

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Section 3.2: Visual Resources

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1.	3.2	3.2-49 Lines 14-17	Construction, operation, and decommissioning of the proposed transmission line in this view would result in a moderate change in the form, line, color, and texture for structures present in the foreground of the existing environment, and a ~~moderate~~ weak change to the form, line, color, and texture for structures present in the middleground of the existing environment.	Please revise in order to be consistent with the analysis summarized on the BLM rating form for KOP 1 presented in Appendix C, which indicates that the visual contrast of the Project in the VRM II portion of the view would be "weak".
2.	3.2	3.2-49 Lines 19-21	The changes to the existing environment would be consistent with the VRM Class III assigned to the foreground ~~but would not be consisten~~ and with the VRM Class II designation in middleground views. Therefore, development of the proposed transmission line would result in a ~~major, adverse, and~~ minor adverse ~~unavoidable~~ effect at KOP 1~~.~~ and mitigation would not be required.	Please revise in order to be consistent with the analysis summarized on the BLM rating form for KOP 1 presented in Appendix C, which indicates that the visual contrast of the Project in the VRM II portion of the view would be "weak" and would thus be consistent with the VRM II objectives.
3.	3.2 Table 3.2-1	3.2-54	**Table 3.2-1 Conformance with VRM or VRI Class** KOP 1 Conformity Determination ~~Does not conform with VRM Class II~~ Conforms	Please revise in order to be consistent with the analysis summarized on the BLM rating form for KOP 1 presented in Appendix C, which indicates that the visual contrast of the Project in the VRM II portion of the view would be "weak" and would thus be consistent with the VRM II objectives.

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4.	3.2	3.2-55 Lines 26-33	**Impact AES-2: Substantially Degrade Existing Character or Quality** Less than significant without mitigation ~~As discussed under the Impacts by Key Observation Point section above, the proposed project would conflict with VRM or VRI objectives for one of the eight KOPs. At KOP 1, the proposed project would introduce moderate levels of contrast with the existing structures in the viewshed by introducing linear elements of a larger scale and more prominent color. This is the only KOP that shows views of VRM Class II areas; all other KOPs show views of VRM Class III or VRI Class III areas.~~	Please revise in order to be consistent with the analysis summarized on the BLM rating form for KOP 1 presented in Appendix C, which indicates that the visual contrast of the Project in the VRM II portion of the view would be "weak" and would thus be consistent with the VRM II objectives and no mitigation would be required.
5.	3.2.4	3.2-59-7	~~**MM AES-2: Rock Staining near the Ivanpah Substation.** For areas that are cleared and/or graded to construct the Ivanpah Substation, the applicant would consult with the BLM regarding feasible methods to treat the exposed rock to match the overall color of the adjacent weathered rock.~~	Please consider deleting since SCE will not be performing any clearing or grading activities related to Ivanpah Substation.

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Section 3.3: Air Quality and Greenhouse Gases

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	3.3.3.5	3.3-11 Lines 36-39	The estimated ~~average~~ maximum daily criteria pollutant emission rate for construction activities is presented in Table 3.3-6. ~~This table also includes the daily MDAQMD significance thresholds~~. The ~~average~~ maximum daily construction emission rates are based on the assumption that construction activities would occur concurrently and that equipment for each activity would be operating on the same day.	Please revise. The MDAQMD CEQA guideline (page 10) states that: "…the emission thresholds are given as a daily value and an annual value, so that multi-phased project (such as project with a construction phase and a separate operational phase) with phases shorter than one year can be compared to the daily value." The daily threshold emission rates are exactly the same as the annual threshold emission rates (548 lbs/day is exactly 100 tons/yr), only the measurement units are different. The daily threshold is simply the annual rate expressed as an annual daily average rate. If a project meets the annual threshold then it is not considered significant under the MDAQMD guidelines. No maximum daily estimate is required under the MDAQMD guidelines. All references to exceeding daily thresholds should be deleted.
2.	3.3.3.5 Table 3.3-7	3.3-15	The estimated total GHG emissions from all construction activities is approximately ~~6,950~~ 426 MTCO2e (see Table 3.3 7).	Construction emissions should be amortized over 30 years to compare to thresholds. Table 3.3-7 should be changed to reflect amortization.
3.	3.3.4	3.3-19 Line 39	**MM AIR-2** • ~~·Planting of vegetative ground cover in disturbed areas within 21 days after construction activities have ceased.~~	Please consider removing as this may conflict with **MM BIO-2 Reclamation Plan.**

EITP DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT
SOUTHERN CALIFORNIA EDISON COMPANY
COMMENTS & SUGGESTED REVISIONS

Section 3.4: Biological Resources

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	3.4.1	3.4-1 Lines 15-16	The EITP is located within the Eldorado and Ivanpah valleys in southern Clark County, Nevada, and in San Bernardino County in southeastern California.	Please add reference to San Bernardino County following original reference to Clark County.
2.	3.4.1	3.4-1 Line 27	These playas are typically high in evaporated salts, and associated plant communities are usually composed of salt-tolerant species.	Please clarify which plant communities are being referred to.
3.	3.4.1	3.4-1 Lines 32-36	At the eastern edge of the Ivanpah Valley in Nevada, the transmission line passes between Sheep Mountain to the north and the north end of the Lucy Gray Mountains, then passes through the northern McCullough ~~Mountains~~ Range. The telecommunication line alternatives pass ~~to the west of~~ between the Highland Range to the east and the South McCullough Range to the west, and, further south, between the McCullough Range and New York mountains and between the South McCullough Range and the Clark Mountains.	Please clarify mountain descriptions relative to transmission and telecommunication lines locations. Please make universal change from McCullough "Mountains" to "Range"
4.	3.4.1.1	3.4-2 Line 6	Field surveys were conducted by the applicant and their biological consultants.	Please add text to clarify.
5.	3.4.1.1	3.4-2 Line 7	New or previously unsurveyed access roads, ~~and~~ spur roads, helicopter staging areas, and other project areas ~~as~~ identified by the applicant ~~will be~~ were surveyed during spring 2010.	Please add description of areas surveyed in spring 2010.
6.	3.4.1.1	3.4-2 Lines 13-19	• Transmission Line Alternative Routes A and B near the Eldorado Substation, and Alternatives C and D and Subalternative E near Primm, Nevada; • The Nipton 33-kV/Earth 12-kV line from the Mountain	Please add last two bulleted items regarding the Nipton 33kV telecom alternatives.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
			Pass Substation south to an existing AT&T microwave site; • The proposed fiber optic route along the existing Eldorado–Lugo transmission line from the Eldorado Substation south to Nipton; ~~and~~ • The Nipton 33-kV line between Nipton and the point where the Nipton 33-kV line crosses I-15; • The Nipton 33-kV line from the point where the Nipton 33-kV line crosses I-15 east to the Mountain Pass Substation; and, • The Nipton 33-kV line from the point where the Nipton 33-kV line crosses I-15 north along I-15 to the Ivanpah Substation;	
7.	3.4.1.1	3.4-2 Line 40	The applicant ~~plans to~~ complete<u>d</u> additional desert tortoise surveys in spring 2010 <u>including the main access road from Highway 95 to the Eldorado Substation, the main access roads from Jean to the existing ROW, two proposed helicopter staging areas, laydown areas, and access roads and tower sites not previously surveyed on the Eldorado-Lugo transmission line.</u>	Please add description of areas surveyed in Spring 2010.
8.	3.4.1.1	3.4-2 Line 41	For the proposed transmission line route and alternatives, biologists surveyed a ~~250~~ <u>230</u>-foot ~~ROW~~ corridor, plus five zone-of-influence transects on each side.	Please clarify 230-foot corridor was surveyed.
9.	3.4.1.1	3.4-2 Line 44	Results of the 2009 desert tortoise surveys are provided in the ~~DRAFT~~ <u>2009</u> Desert Tortoise Survey Report (Karl 2010), in Appendix B-2 of this document. <u>Results of the 2010 desert tortoise surveys are provided in the 2010 Desert Tortoise Survey Report (Karl 2010), in Appendix B-x of this document.</u>	The 2010 desert tortoise report was submitted in May 2010.
10.	3.4.1.1	3.4-2 Line 50	Field surveys for rare plants were conducted <u>in 2008</u> along the proposed route and in most project areas; however, some areas were not covered, including some alternative routes and existing substation facilities. <u>Field surveys were conducted in 2009 for project transmission and telecommunication alternative routes not identified in 2008.</u>	Please consider revising to include information on 2009 surveys.
11.	3.4.1.1	3.4-3	Additionally, the Ivanpah Dry Lake playa and disturbed	Please consider revising.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
		Lines 1-2	ground areas and paved roads and parking lots near Primm, Nevada, were not surveyed due to a lack of suitable habitat.	
12.	3.4.1.1	3.4-3 Line 3	Additional surveys for rare plants ~~will be~~ were completed by the applicant in spring 2010 for the proposed transmission and telecommunication routes and for areas not previously surveyed.	Please clarify time and areas for plant surveys.
13.	3.4.1.1	3.4-3 Line 3	In 2008, an invasive/noxious weed survey was performed along the proposed project route from the existing Eldorado Substation to the proposed Ivanpah Substation site, extending west along the fiber optic communications route to the Mountain Pass Substation. The 2010 botanical survey included an invasive/noxious weed survey along the proposed transmission and telecommunication lines.	Please clarify time and area of invasive/noxious weed surveys.
14.	3.4.1.1	3.4-3 Line 7	Survey results for both reconnaissance and protocol-level surveys are provided in the Eldorado–Ivanpah Transmission Project Biological Technical Report (EPG 2009) and in the survey reports for the 2010 surveys (desert tortoise, raptors, botanical survey, and jurisdictional delineation).	Please add 2010 survey reports reference.
15.	3.4.1.1	3.4-3 Lines 14-17	As biological resources can move into project boundaries after initial surveys have been conducted, pre-construction surveys identify the current status of biological resources within project boundaries and allow for appropriate management if any sensitive ~~organisms~~ resources are found.	Please consider using “resources” in place of “organisms.”
16.	3.4.1.1 Table 3.4-1: bighorn sheep	3.4-3	McCullough Range ~~Pass~~, Highland Pass between Highland Range and South McCullough Mountains, Mountain Pass Substation area	Please clarify: the transmission line does not go through the named “McCullough Pass”, which is about a mile south of the ROW
17.	3.4.1.1 Table 3.4-1: burrowing owl	3.4-3	Habitat assessment to be conducted ~~migratory bird~~ during 2010 raptor survey and preconstruction surveys	A raptor survey was conducted in 2010 through consultation with the BLM
18.	3.4.1.1 Table 3.4-1: desert tortoise	3.4-3	~~May~~ April 2010 and preconstruction clearance surveys	The 2010 desert tortoise survey was conducted in April.
19.	3.4.1.1 Table 3.4-1: jurisdictional	3.4-3	~~Jan~~ Feb 2010	The jurisdictional delineation survey was conducted in February 2010

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
	delineation			
20.	3.4.1.1 Table 3.4-1: jurisdictional delineation	3.4-3	Project area to be surveyed for washes/other areas that ~~will~~ may require water permits	Water permit requirements have not been determined by appropriate permitting agencies.
21.	3.4.1.1 Table 3.4-1: raptors	3.4-3	~~December 2009~~ January, April, and May 2010, and preconstruction surveys	Please clarify survey dates.
22.	3.4.1.1	3.4-23 Lines 14-18	Vegetation present within the larger desert washes in the proposed project area includes widely scattered catclaw acacia (*Acacia greggii*) and, more commonly, ephedra, cheesebush, and sweetbush. Mesquite mistletoe (*Phoradendron californicum*) occurs in some of the catclaw acacia in wash areas. Vegetation along canyon bottoms and washes in the McCullough ~~Mountains~~ Range is shrub-dominated, with no emergent tree species. Shrubs present include catclaw acacia, wolfberry, California trixis (*Trixis californica*), Virgin River brittlebush, and California buckwheat. Vegetation in the majority of smaller washes at lower elevations is the same as the adjacent vegetation community.	Please clarify vegetation types in washes in the project area.
23.	3.4.1.	3.4-23 Line 23	~~For the proposed project, this vegetation type occurs at the higher elevations in the Clark Mountains~~	The proposed project does not go through this habitat type; only the Mountain Pass telecommunication alternative does.
24.	3.4.1.1	3.4-24 Lines 30-34	Noxious weeds are species of non-native plants included on the weed lists of the U.S. Department of Agriculture (USDA; USDA 2009a), the California Invasive Plant Council (CIPC; CIPC 2006), the Nevada State Department of Agriculture, and those weeds of special concern identified by the BLM. Noxious weeds are a concern due to their potential to ~~cause permanent damage~~ impact ~~to~~ natural plant communities directly via competition or indirectly through alteration of the natural fire regime. No high concentrations of noxious weeds were observed anywhere along the project ROW.	Please add data references (Nevada) to clarify impacts. Please change “permanent damage” to “impact”
25.	3.4.1.1	3.4-25	Vegetation Type: ~~Pinion pine-juniper woodland~~	This habitat type is not found in the proposed

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	Table 3.4-2			project area, only on the telecommunications route alternative between Ivanpah Substation and Mountain Pass Substation
26.	3.4.1.1 Table 3.4-2	3.4-25	UNKNOWN (Areas of temporary/permanent impacts outside applicant-provided data layer)	Please provide clarification on which areas are being referred to.
27.	3.4.1.1	3.4-26 Lines 2-3	Ivanpah Lake ~~and Roach lakes are~~ is crossed by the proposed project and/or the alternatives; the proposed project passes within 200 feet of the eastern edge of Roach Lake, and Jean and Eldorado lakes lie ~~adjacent to~~ within the vicinity of the project.	Please clarify project route locations relative to dry lakes.
28.	3.4.1.1	3.4-26 Lines 10-12	The proposed telecommunications line just north and east of Nipton lies within the vicinity of Big Tiger Wash, a larger drainage between the southern McCullough Range and the New York mountains.	Please clarify the description of the telecommunication route alternative.
29.	3.4.1.1	3.4-26 Lines 14-17	The specific condition of these desert drainages was assessed during ~~has not been determined;~~ a jurisdictional delineation survey conducted in early spring 2010 by the applicant. The delineation report documents drainage characteristics (including riparian vegetation presence) and determines potential jurisdictional extents based on the U.S. Army Corps of Engineers (USACE) and the CDFG codes and regulations.	Please clarify to reflect results of jurisdictional delineation survey and report submitted May 20, 2010.
30.	3.4.1.1	3.4-26 Lines 21-23	The mammalian fauna with potential to occur in the project area is dominated by small, mostly nocturnal species of rodents and bats. Diurnal mammals are also potentially common and include hares, rabbits, ground squirrels (*Spermophilus tereticaudus*), and ungulates. The following species were observed ~~on~~ in the project ~~site~~ area:	Please clarify difference between "potentially occurring" and "observed" during surveys.
31.	3.4.1.1	3.4-26 Lines 29-32	Very few amphibian species have the potential to occur within the proposed project area: two in California and four in Nevada. In contrast, the potential reptilian fauna is very diverse for the project in both California and Nevada. There are potentially 15 lizard species, 18 snake species, and one tortoise species that occur within the EITP in California. The EITP in Nevada provides potential habitat for 17 lizard species, 18 snake species, and one tortoise species.	Please clarify species "potential to occur " versus "occurrence."
32.	3.4.1.1	3.4-26	Many of these birds ~~would~~ may only winter in the area	Please clarify species "potential to occur " versus

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
		Lines 36-39	(e.g., Northern flicker [*Colaptes auratus*], sage thrasher [*Oreoscoptes montanus*], and white-crowned sparrow [*Zonotrichia luecophyrs*]), while others, such as the red-tailed hawk (*Buteo jamaicensis*), chukar (*Alectoris chukar*), and greater roadrunner (*Goecoccyx californianus*) are potentially year-round residents.	"occurrence."
33.	3.4.1.1	3.4-26	[2] NOTE: Lack of delineation is a significant data gap. This document is incomplete without this information from SCE as impact analysis cannot be conducted.	The jurisdictional delineation survey was conducted in February 2010 and submitted on May 20, 2010.
34.	3.4.1.1	3.4-27 Line 8	West of Ivanpah Dry Lake, the existing ROW crosses both small and broad washes as the 115kV transmission line heads up to Mountain Pass to Ivanpah substation.	Please clarify which transmission line goes to Mountain Pass substation.
35.	3.4.1.1 Table 3.4-4	3.4-29	Mammal: Wild Burro, Habitat: Mostly low desert environments in scrublands and woodlands. Individuals observed and scat recorded in California at west Ivanpah Lake	Please clarify that species were observed.
36.	3.4.1.1 Table 3.4-4	3.4-29	Birds: Golden Eagle, Habitat: Recorded near Ivanpah Substation site in California and Observed in Nevada on the Eldorado-Lugo telecom route.	Please clarify that species were observed.
37.	3.4.1.1 Table 3.4-5	3.4-31	Plant: Catclaw Acacia, Potential: ~~L~~ O	Catclaw acacia has been observed in the Nevada portion of the project.
38.	3.4.1.1 Table 3.4-5	3.4-31	Mammal: Wild Burro, Habitat: Mostly low desert environments in scrublands and woodlands. Individuals observed and scat recorded in California at west Ivanpah Lake	Please clarify that species were observed.
39.	3.4.1.1 Table 3.4-5	3.4-31	Birds: Golden Eagle, Habitat: Observed on Eldorado-Lugo telecom route and recorded near Ivanpah Substation site in California, Potential: ~~L~~ O	Please clarify that species were observed.
40.	3.4.1.1 Table 3.4-5	3.4-32	Birds: Peregrine Falcon, Habitat: Nests on cliffs surrounded by large expanses of open space in a variety of habitats. Known to breed in the McCullough Range. Observed on the transmission route east of Primm., Potential: ~~L~~ O	Please clarify that species were observed.
41.	3.4.1.1 Table 3.4-5	3.4-32	Birds: Prairie Falcon, Habitat: Nests on cliffs surrounded by large expanses of open space in a variety of habitats. Known to breed in the McCullough Range. Observed on the transmission route west of Eldorado Substation., Potential: ~~L~~ O	Please clarify that species were observed.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
42.	3.4.1.1 Table 3.4-5	3.4-32	Reptiles: Desert tortoise, Habitat: Occurs in Mojave Desert scrub and Joshua tree woodlands in valleys, on bajadas, and in low hills at elevations up to 4,900 feet. Sign and individuals observed ~~at various points along the project alignment~~ within suitable habitat throughout the project area.	Please clarify that species were observed.
43.	3.4.1.1 Table 3.4-5	3.4-33 footnote	Legend at bottom of Table 3.4-5 Potential of Occurrence L = Likely (moderate or better potential O = Observed During Reconnaissance Studies or Focused Surveys	Please clarify definition of "Potential of Occurrence."
44.	3.4.1.1	3.4-34 Lines 7-11	~~Twenty-nine~~ Thirty-three special-status plant species occur or are ~~very~~ likely to occur along the California segment of the project, while ~~four~~ seven special-status plant species occur or are ~~very~~ likely to occur along the Nevada segment of the project. Based on a review of the existing state and federal databases, no plant species listed as threatened or endangered by the federal government or the states of California or Nevada are expected to occur within the proposed project area.	Please clarify: Table 3.4-4 and 3.4-5 only include a "Likely to Occur" to occur category which is defined as "moderate or better potential." "Very likely to occur" is not defined. Please revise numbers based on number of species in tables. Number of special status species made consistent with Tables 3.4-4 and 3.4-5.
45.	3.4.1.1	3.4-34 Lines 25-26	This plant was observed along Transmission Alternative Route D in ~~California~~ Nevada.	Please clarify species locations.
46.	3.4.1.1	3.4-35 Line 1	Mojave Milkweed – A single Mojave milkweed plant was observed during the rare plants survey approximately 0.55 miles southwest of the proposed Ivanpah Substation site in California.	Please clarify species locations.
47.	3.4.1.1	3.4-37 Line 6-7	Barrel Cactus – This species was found in moderate density along the proposed route in California west of Ivanpah Dry Lake and on the transmission routes in Nevada near and in the McCullough Range.	Please clarify species locations.
48.	3.4.1.1	3.4-37 Lines 40-41	Rough menodora – Rough menodora ~~has not been~~ was observed during surveys along the telecommunication route south east of the Mountain Pass substation ~~but~~ and may occur within the project limits on the east flank of the Clark Mountains.	Please clarify that species was observed and location(s).
49.	3.4.1.1	3.4-37	Polished Blazing Star –	Please clarify that the proposed project is not in

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
		Line 48	This species could occur within the ~~proposed~~ project area in the Clark Mountains ~~in the Mountain Pass area.~~	the Mountain Pass area; the Mountain Pass telecommunication alternative is in this area.
50.	3.4.1.1	3.4-38 Line 12-13	Tough Muhley – Tough muhly could be present in the ~~proposed~~ project area near the Mountain Pass Substation.	Please clarify proposed project is not in the Mountain Pass area; the Mountain Pass telecommunication alternative is in this area.
51.	3.4.1.1	3.4-39 Lines 24-25	Aven Nelson's phacelia – Aven Nelson's phacelia was observed at four closely spaced locations in the ~~proposed~~ project area, about 1 mile northeast of the Mountain Pass Substation.	Please clarify that the proposed project is not in the Mountain Pass area; the Mountain Pass telecommunication alternative is in this area.
52.	3.4.1.1	3.4-39 Lines 30-32	Sky-blue phacelia – Sky-blue phacelia was observed in the project area in California ~~as a single occurrence approximately 2.8 miles northeast~~ northeast and south of the Mountain Pass Substation and along the telecom route on Nipton Road east of Nipton.	Please clarify species locations.
53.	3.4.1.1	3.4-40 Lines 11-13	Catclaw acacia – In Nevada, Catclaw acacia occurs with desert wash vegetation (Gucker 2005), and could occur within any portion of the project with this vegetation type. Catclaw acacia has been observed in desert washes within the project area in California and Nevada	Please clarify species locations.
54.	3.4.1.1	3.4-40 Lines 27-28	Wildlife – Based on desktop analysis and field surveys, several special-status wildlife species are known to occur or ~~have a very high potential~~ are likely to occur within the EITP (Tables ~~3.4-3~~ 3.4-4 and ~~3.4-4~~ 3.4-5).	Please clarify "very high potential" has not been defined. Please correct table numbers.
55.	3.4.1.1	3.4-41 Lines 1-2	Tortoises prefer flowers of annual plants and grasses, but will also ~~assume~~ consume cacti and the vegetation of woody plants ~~herbs~~.	Please clarify.
56.	3.4.1.1	3.4-41 Lines 12-23	In Nevada, the proposed redundant telecommunication line would cross approximately 11.8 miles of the Piute-Eldorado Critical Habitat Unit to the south of the Eldorado Substation (Figure 3.4-2, Table 3.4-6). In California, the proposed redundant telecommunications line would cross approximately 3.1 miles of the Ivanpah Critical Habitat Unit between the California-Nevada state line and the	Please clarify potential impacts to desert tortoise critical habitat due to undergrounding the fiber optic line along Nipton Road.

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			proposed microwave tower site to the northeast of the town of Nipton. Approximately 2.4 miles of this portion of the proposed telecommunication route along Nipton Road would be installed underground within the existing road shoulder minimizing the potential impacts to desert tortoise habitat. The proposed microwave tower site would also be located entirely within the Ivanpah Critical Habitat Unit for the desert tortoise. **(*new paragraph*)** Both of the alternative redundant telecommunications line routes (Mountain Pass and Golf Course) would cross the Ivanpah Critical Habitat Unit in California. While in Nevada these two alternative redundant telecommunication routes are identical to the proposed route, the California segments differ significantly from the proposed route. Whereas the proposed redundant telecommunication route would cross approximately 3.1 miles of the critical habitat in California, the Golf Course alternative would cross approximately 12.9 miles of the Ivanpah Critical Habitat Unit, and the Mountain Pass alternative would cross approximately 12.8 miles of the Ivanpah Critical Habitat Unit (Figure 3.4-2, Table 3.4-6). Although portions of the telecommunication route alternatives located adjacent to Nipton Road and I-15 are within desert tortoise critical habitat, these segments of the telecommunication route would be installed underground within the existing road shoulder on Nipton Road or overhead on the existing Nipton 33-kV distribution line minimizing the potential impacts to desert tortoise habitat.	
57.	3.4.1.1	3.4-42 Lines 2-11	During protocol-level desert tortoise surveys conducted in 2008, ~~and~~ 2009, and 2010 desert tortoises or associated sign (scat, burrows, shell fragments) were observed throughout most of the survey area with the exception of the developed and disturbed areas around Primm, Nevada, disturbed areas near the Molycorp Mine west of 1-15, the dry lake playas (Roach and Jean), and the higher elevation areas around Mountain Pass Substation. Desert tortoise densities in the Nevada portion of the proposed project area as reported by the BLM range from very low to moderate (Figure 3.4-2).	Please add information regarding the 2010 desert tortoise survey. Also see comment for page 3.4-2.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
			Desert tortoise densities for the California portion of the project were not reported by BLM. The desert tortoise 2008 survey results are an appendix to the Eldorado-Ivanpah Transmission Project Biological Technical Report (EPG 2009), while the 2009 survey results are provided as a separate document. The Biological Technical Report and the desert tortoise 2008 survey results are found in Appendix B-1 Biological Technical Report and the 2009 Desert Tortoise Surveys are found in Appendix B-2 Desert Tortoise Surveys Results of the 2010 desert tortoise surveys are provided in the Desert Tortoise Survey Report (Karl 2010), in Appendix B-x of this document.	
58.	3.4.1.1	3.4-45 Lines 6-7	Western Banded Gecko – The western banded gecko is ~~very~~ likely to be present within the proposed project area, and because it accepts various soil types and elevation, it could be present anywhere (Degenhardt et al. 1996).	Please clarify species potential to occur.
59.	3.4.1.1	3.4-48 Lines 6-7	Wild Burros – ~~Although no burros were identified during field surveys,~~Individual burros and recent burro scat was observed on the west edge of Ivanpah Dry Lake.	Please include species observations.
60.	3.4.1.1	3.4-52 Lines 29-30	~~No~~ One raptor nest~~s~~ ~~were~~ was observed during the 2010 raptor survey ~~in any~~ on an~~y~~ existing lattice tower on a transmission line ~~on~~ adjacent to the Eldorado–Lugo line.	Please include species observations.
61.	3.4.1.1	3.4-52 Lines 45-46	The golden eagle was ~~recorded~~ observed near the Ivanpah Substation site during project surveys and during surveys for the ISEGS site in 2008 (CEC 2008) and on the Eldorado-Lugo line south of Eldorado Substation during the 2010 raptor survey.	Please include species observations.
62.	3.4.1.1	3.4-53 Lines 25-26	A burrowing owl was observed along Transmission Alternative Route C during project surveys. They were also observed on the adjacent proposed ISEGS site (CEC 2008). No burrowing owls were observed during the 2010 raptor survey.	Please clarify species observations.
63.	3.4.1.1	3.4-54 Lines 12-14	The peregrine falcon is known to occur in the project vicinity (Floyd et al. 2007), as the project area contains both suitable open areas for foraging and suitable nesting habitat in the form of cliff ledges within the McCullough	Please clarify species observations.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
			Mountains. One peregrine falcon was observed on the transmission route east of Primm during the 2010 raptor survey.	
64.	3.4.1.1	3.4-54 Lines 28-29	The prairie falcon prefers to nest on cliff faces using ledges, cavities, or crevices and will also lay eggs in abandoned stick nests of eagles, hawks, or ravens (Steenhof 1998). One prairie falcon was observed west of the Eldorado Substation during the 2010 raptor survey.	Please clarify species observations.
65.	3.4.2.1	3.4-61 Lines 5-6	The nine statewide Regional Water Quality Control Boards (RWQCBs) develop and enforce water quality standards within their boundaries. The Lahontan RWQC has jurisdiction over the California portion of EITP.	Please clarify RWQCB jurisdiction.
66.	3.4.3.3	3.4-66 Lines 43-44	Estimates for desert tortoise densities present within the EITP were provided from the 2008, ~~and~~ 2009, and 2010 survey reports from SCE.	Please clarify desert tortoise survey information.
67.	3.4.3.4	3.4-67 Lines 19-23	**APM BIO-3: Avoid Impacts on State and Federal Jurisdiction Wetlands.** Construction crews would avoid impacting the streambeds and banks of streams along the route to the extent possible. ~~If necessary, a SAA would be secured from the CDFG.~~ As applicable, the necessary permits would be obtained from the appropriate agencies. Impacts would be mitigated based on the terms of the ~~SAA~~ permits. No streams with flowing waters capable of supporting special-status species would be expected to be impacted by the proposed project.	Please insert clarification of potential permitting requirements.
68.	3.4.3.4	3.4-69 Lines 42-46	**APM BIO-11: Desert Tortoise Measures** • The applicant would implement a Raven Management Program that would consist of: (1) an annual survey to identify raven nests on towers, and any tortoise remains at ~~the base of the~~ tower~~s~~ locations; this information would be relayed to the BLM so that the ravens and/or their nests in these towers could be targeted for removal, (2) SCE making an annual or one time contribution to an overall raven reduction program in the California or Nevada desert, with an emphasis on raven removal in the vicinity of this project.	Please clarify raven management program annual survey.

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69.	3.4.3.4	3.4-70	**APM BIO-12: Desert Bighorn Sheep Measures.** The applicant would consult with the BLM, USFWS, and NDOW regarding conservation measures to avoid impacts on desert bighorn sheep during construction. Project areas with the potential to impact bighorn sheep include the proposed transmission line route through the McCullough Mountains and the telecommunication route segment in the southern Eldorado Valley between the Highland Range and the Southern McCullough Mountains. Avoidance and minimization measures could include such elements as preconstruction surveys, biological monitoring, and timing construction activities to avoid bighorn sheep active seasons. ~~Construction requiring the use of helicopters would be conducted outside of bighorn lambing season (April through October) and the dry summer months when bighorn may need to access artificial water sources north of the propose route in the McCullough Mountains (June through September).~~ Construction activities in lambing areas from January to May in the North McCullough Pass area (approximately MP 9 to MP12) would only occur if a preconstruction survey is conducted and a biological monitor is present during construction activities.	Please revise to be consistent with Mitigation Measure BIO-13.
70.	3.4.3.5	3.4-71 Lines 13-22	**Vegetation** Clearing and grading or other ground-disturbing activities for project infrastructure (~~the substation,~~ improvements to existing access/spur roads, new access/spur roads, staging areas, pulling areas, stringing and splicing areas, and tower foundations for the transmission and telecommunications lines) would cause the direct loss of vegetation communities within the project area boundaries. … Other project infrastructure would be permanent, and vegetation would be permanently impacted for those project areas (~~substation,~~ access roads, and towers).	Please note that "clearing and grading" does not accurately describe the ground disturbing impacts for much of the project. Impacts associated with clearing and grading of the Ivanpah substation site are discussed in the BrightSource environmental document.
71.	3.4.3.5	3.4-72 Lines 37-39	MM BIO-2 involves restoration of vegetation and soils within the proposed project area to preconstruction conditions, immediately following the completion of all construction-related activities at impact sites and within one	Please clarify that restoration cannot begin until all construction-related activities have been completed at a given site.

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			year post-construction, according to the requirements of wildlife resource agencies' authorizations.	
72.	3.4.3.5	3.4-73 Lines 22-23	A complete assessment of potential effects to jurisdictional waters, riparian areas, and wetlands caused directly or indirectly by the proposed project ~~cannot be~~ has been completed ~~until~~ and the Jurisdictional Delineation report was submitted on May 20, 2010. ~~surveys are conducted.~~ [1] ~~NOTE: Pending a jurisdictional delineation, analysis on this section is incomplete.~~ [1] ~~NOTE: Need to include acres of impacts (not available at this time)~~	Please revise to reflect that the Jurisdictional Delineation report has been submitted on May 20, 2010.
73.	3.4.3.5	3.4-73 Lines 36-38	~~If~~ The ~~pending~~ Jurisdictional ~~Determination~~ Delineation survey identified the presence of potentially jurisdictional waters~~,~~ or riparian areas ~~or wetlands~~ within the proposed project area~~,~~ ~~i~~If these features cannot be avoided (APM BIO-3), the adverse impacts will likely be moderate and both short term and long term.	Please note that the Jurisdictional Delineation report has been submitted on May 20, 2010.
74.	3.4.3.5	3.5-74 Lines 2-4	**Wildlife** Clearing and grading or other ground-disturbing activities for project infrastructure (the Ivanpah substation, existing access/spur roads, and new access/spur roads, staging areas, pulling areas, stringing and splicing areas, and tower foundations for the transmission and telecommunications lines) would be potential sources of direct death of wildlife.	Please note that "clearing and grading" does not accurately describe the ground disturbing impacts for much of the project.
75.	3.4.3.5	3.4-74 Line 21	Substation infrastructure built could alter wildlife movement, as animals ~~would~~ may avoid construction areas such as those for the microwave tower and other permanent structures.	Please clarify if impacts are permanent or temporary relating to construction activities or project structures.
76.	3.4.3.5	3.4-76 Lines 25-27	Desert tortoise sign such as burrows, scat, and bone or shell fragments were observed in almost all areas of the proposed transmission alignment during surveys conducted in 2008 and 2009, including on the proposed Ivanpah Substation site in California.	Please include 2009 desert tortoise survey.

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77.	3.4.3.5	3.4-76 Lines 30-35	The redundant telecommunications line is almost entirely within desert tortoise habitat. ~~While surveys of this area have not currently been reported (pending~~ The results of the 2009 and 2010 desert tortoise surveys ~~and available literature suggests~~ indicate that desert tortoise is present along the lower elevations of this segment of the project. Several areas within the proposed project area are not suitable habitat for desert tortoise, including Roach and Ivanpah lakes (dry), the disturbed and developed areas in and around the town of Primm, Nevada, and the higher elevations of the Eldorado–Lugo transmission line in the southern McCullough Range where desert tortoise sign was not observed during the 2009 and 2010 surveys.	Please include 2009 desert tortoise survey.
78.	3.4.3.5	3.4-78 Line 23	There is the potential for 17 protected mammal species to occur within the proposed project area (Tables ~~3.4-.3~~ 3.4-4 and ~~3.4-4~~ 3.4-5).	Please confirm table numbers.
79.	3.4.3.5	3.4-78 Lines 39-40	The transmission route bisects the McCullough Range and the communication line bisects the pass between the McCullough Range and the Highland Range.	Please clarify telecommunications route location description.
80.	3.4.3.5	3.4-79 Lines 31-33	**American Badger** However, the amount of permanent habitat lost (less than approximately 51 acres) is relatively small compared with the total amount of available suitable badger habitat within this area.	Please confirm that permanent habitat loss is less than approx. 51 acres.
81.	3.4.3.5	3.4-80 Lines 45-46	~~No surveys for nesting birds~~, Raptor and raptor nest ~~, or nests~~ surveys were conducted for the proposed project~~,~~ ~~although the applicant plans to commence raptor and raptor nest surveys~~ in S~~s~~pring 2010. One stick nest was observed in a transmission tower during the 2010 survey.	Please update to include results of 2010 raptor survey.
82.	3.4.3.5	3.4-86	~~The alternative would result in impacts on the Clark County MSHCP and the BCCE, as the entire alternative lies outside a pre-existing ROW within lands preserved by these plans. Biological resources and species targeted for conservation and protection by these plans, particularly the desert tortoise, would be potentially impacted by the project. However, MM BIO-1 through BIO-16 would significantly reduce biological impacts. Furthermore, the applicant~~	Please consider revising to be consistent with Land Use section 3.9: "Transmission Alternative Route A would bypass the segment of the proposed transmission line alignment between MP 1 and MP 7 and would be constructed entirely within a BLM-designated utility corridor, thus

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			~~would be required to initiate discussions with Clark County and Boulder City concerning additional fee-based compliance and mitigation measures to ameliorate biological impacts. This compliance would be directly based on~~ ~~the provisions of the MSHCP and the BCCE. Impacts to provisions of the plans would be reduced to less than significant with the incorporation of results from biological mitigation and compliance discussions.~~	avoiding potential conflicts with the BCCE." See Land Use 3.9, p.3.9-21 (lines 19-27) and p. 3.9-23 (lines 13-16). See also, Appendix C, BLM February 2010 letters to Clark County and Boulder City.
83.	3.4.3.7	3.4-85	[7] ~~NOTE: Will be verified once JD complete.~~	Please note that the jurisdictional delineation report was submitted on May 20, 2010.
84.	3.4.3.7	3.4-86 Lines 36-40	~~Surveys are still ongoing; for instance, burrowing owl and raptor surveys will be conducted in 2010. Thus, pending results, analysis of impacts to these species for this alternative (and for other alternatives) cannot be completed. Although site-specific data is not complete at this time, analysis of potential impacts to listed and sensitive species is still possible without all the data (40 CFR 150.22) and by assuming a high likelihood of species presence.~~	Please update this paragraph to reflect the 2010 survey results.
85.	3.4.3.10	3.4-88 Line 48	Transmission Alternative Route D and Subalternative E were suggested by BLM to minimize <u>recreational</u> impacts to the Ivanpah Dry Lake.	Please clarify that these alternatives were suggested by the BLM to minimize impacts to recreational activities, which is accounted for in Section 3.12.3.5 (Recreation)
86.	3.4.3.11	3.4-90 Lines 15-23	The additional communication line located between the Town of Nipton and I-15 would cross approximately 12.9 miles of designated desert tortoise critical habitat (Ivanpah Unit), approximately 9.8 miles more than the proposed telecommunication route (Table 3.4-6). All the disturbance created within this section of this alternative would be permanent in terms of restoration, mitigation, and compensation requirements. Desert tortoise surveys for this alternative found a greater amount of tortoise sign within the Golf Course Telecommunication Alternative than within the proposed project. <u>However, impacts to desert tortoise habitat would be minimized since the fiber optic line will be installed in the disturbed road shoulder or on the existing Nipton 33kV distribution line.</u> Additionally, when compared with the proposed project, this alternative	Please specify location of the underground fiber optic line relative to desert tortoise habitat.

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			would increase potential impacts on desert tortoise due to the significantly increased impacted critical habitat acreage. However, once final density calculations of desert tortoise are available, they should be used to compare this alternative with the proposed project.	
87.	3.4.3.12	3.4-91 Lines 9-13	The sensitive plant species that occur along this alternative are rough menodora, sky-blue phacelia, *Coryphantha* spp., Clark Mountain buckwheat, black grama, Aven Nelson's phacelia, and nine-awned pappus grass. However, potential impacts would be minimized since the fiber optic line would be installed overhead on the existing Nipton 33 kV line. The increase in the acreage of previously undisturbed habitat that would be impacted as a result of this alternative would increase the potential for introduction of invasive, non-native, or noxious plant species. Special-status wildlife would also be impacted by this alternative.	Please note that impacts would be minimized since the fiber optic line would be installed overhead on the existing distribution line.
88.	3.4.3.12	3.4-91 Lines 15-26	The alternative route would be directly adjacent to special management areas for desert tortoise and bighorn sheep (Clark Mountain ACEC and CDFG Zone 3 for bighorn sheep; Figure 3.4-4). Although the Clark Mountains do not provide suitable lambing habitat for desert bighorn sheep, they do provide suitable habitat for foraging. Thus, compared with the California portions of the proposed route which do not pass into the Clark Mountains, this alternative is in closer proximity to areas that would provide additional habitat for the sheep. Therefore, greater temporary impacts from human presence and noise could result from this alternative, although these would be minor because the Clark Mountains are not crucial breeding habitat for the sheep. Increased disturbance impacts to birds could result from this alternative. Montane bird species use the upper elevations of the Clark Mountains for foraging and nesting. The Mountain Pass Substation is adjacent to this area; however, the substation and distribution line already exists and thus any additional impacts from construction noise and human disturbance to nearby nesting birds would be temporary and minor. Impacts in the Mountain Pass area would be minimized since the fiber optic line would be installed overhead on the existing Nipton 33kV distribution	Please note that impacts would be minimized since the fiber optic line would be installed overhead on the existing distribution line.

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			line and no new structures would be constructed. ~~As discussed for the Golf Course Alternative, this alternative could also have some beneficial impacts not provided by the proposed project on raptors in the area, because additional new towers would be installed.~~	
89.	3.4.3.12	3.4-91 Lines 28-37	The Mountain Pass Telecommunication Alternative would cross approximately 12.8 miles of designated desert tortoise critical habitat (Ivanpah Unit); a 9.7-mile increase compared with the proposed telecommunication route (Table 3.4-6). This would include the same 10-mile segment that is part of both the Mountain Pass and the Golf Course alternative. The Mountain Pass Telecommunication Alternative would impact approximately 0.08 miles less of critical habitat than would the Golf Course Alternative (Table 3.4-6). As previously discussed, all of the disturbance created within this 10-mile section would be permanent in terms of restoration, mitigation, and compensation requirements. Desert tortoise surveys for this alternative found more tortoise sign (e.g., scat, tracks, tortoise, burrow, shell) within the Mountain Pass Telecommunication Alternative than within the proposed project. Additionally, when compared with the proposed project, this alternative would increase the potential of impacting desert tortoise due to the significantly increased amount of critical habitat that would be impacted. However, impacts to desert tortoise habitat would be minimized since the fiber optic line will be installed in the disturbed road shoulder or on the existing Nipton 33kV distribution line.	Please specify location of the underground fiber optic line relative to desert tortoise habitat.
90.	3.4.3.5	3.4-92 Lines 22-24	**MM BIO-3: Special-Status Plants Restoration and Compensation.** The applicant will mitigate for the loss of special-status plant species within the project area ~~immediately~~ following the completion of all construction activities at a site and within 1 year of post-construction according to the requirements of resource agency authorizations (e.g., CDFG 2081 permit).	Please note that mitigation cannot begin until all construction activities have been completed at a particular site.
91.	3.4.3.5	3.4-93 Lines 16-22	**MM BIO-9: Cover Steep-walled Trenches or Excavations during Construction.** To prevent entrapment of wildlife, all steep-walled trenches, auger holes, or other	Please clarify that an appropriate tool may be used.

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			excavations will be covered at the end of each day. Fencing will be maintained around the covered excavations at night. For open trenches, earthen escape ramps will be maintained at intervals of no greater than 0.25 miles. A biological monitor will inspect all trenches, auger holes, or other excavations a minimum of twice per day, and also immediately prior to back-filling. Any wildlife species found will be safely removed and relocated out of harm's way, using a suitable tool such as a pool net when applicable. For safety reasons, biological monitors will under no circumstance enter open excavations.	
92.	3.4.3.5	3.4-93 Lines 23-26	**MM BIO-10: Biological Monitors.** Biological monitors will be provided throughout construction activities in all construction zones with the potential for presence of sensitive biological resources. A minimum of one monitor per crew is needed for construction crews using heavy equipment (e.g., backhoes, large trucks). One roving monitor will monitor multiple times per day in other active construction zones where heavy equipment is not in use.	Please clarify monitoring would not be required for areas with no habitat, e.g. developed areas or within substation fence lines.
93.	3.4.3.5	3.4-93 Line 44	**MM BIO-12: Desert Tortoise** • Qualified and/or authorized biologists will conduct preconstruction surveys according to the most current USFWS protocol.	Please clarify.
94.	3.4.3.5	3.4-94 Line 8	**MM BIO-12: Desert Tortoise** • Biological monitors will clear all active work sites located in desert tortoise habitat each morning before construction begins and throughout the day if crews move from ~~tower~~ construction site to construction site.	Please clarify.
95.	3.4.4	3.4-95-11	**MM BIO-13: Desert Bighorn Sheep Impacts Reduction Measures**. To reduce impacts on desert bighorn sheep, the following will be done • ~~Avoid all~~ Construction activities ~~(with the exception of vehicle use of access roads during emergencies)~~ in lambing areas from January to May in the North McCullough Pass area (approximately MP 9 to MP 12) would only occur if a preconstruction survey is conducted and a biological	Please consider revising this language as construction activities would be prolonged if SCE is not allowed from MP 9-12 during the months of January through May. This potential delay could result in additional environmental impacts from prolonged operations.

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			monitor is present during construction activities. ~~during the duration of construction and all maintenance events.~~	
96.	3.4.3.5	3.4-95 Line 43	**MM BIO-15 Migratory Birds and Raptors** • As outlined by the *Suggested Practices for Avian Protection on Power Lines* (APLIC 2006), transmission, subtransmission, and distribution structures will be designed and constructed to be avian safe by ensuring a minimum phase to phase and phase to ground separation of 60 inches horizontal and 40 inches vertical will be maintained or energized equipment will be covered ~~the following avian safe practices will be employed during construction: cover phase conductors with manufactured covers, include perch discouragers on crossarms and on top of poles, exceed the minimal distance between phase conductors~~ to prevent electrocution by perched birds and their wingspan~~., utilize longer horizontal insulators, suspend phase conductors on pole top and cross arms, install horizontal jumper support to increase the phase-to-ground separation, replace tension members with fiberglass or non-conducting materials, cover tension members with dielectric material, utilize fiberglass poles or switches, and install standard nest discouragers.~~	Please consider revising to allow flexibility in determining most effective means for reducing avian electrocution potential.
97.	3.4.3.5	3.4-96 Lines 18-26	If burrowing owls are found on site in the California portion of the project, the following additional measures will be included: 1) As compensation for the direct loss of burrowing owl nesting and foraging habitat, the project proponent shall mitigate by acquiring and permanently protecting known burrowing owl nesting and foraging habitat at ~~the~~ a ~~following~~ ratio to be determined by consultation with resource agencies (USFWS, BLM, CDFG). ~~:~~ ~~(a) Replacement of occupied habitat with suitable habitat at 1.5 x 6.5 acres per pair or single bird;~~ ~~(b) Replacement of occupied habitat with habitat contiguous with occupied habitat at 2 x 6.5 acres per pair or~~	Please consider determining mitigation ratios by consultation with applicable agencies.

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			~~single bird; and/or~~ ~~(c) Replacement of occupied habitat with suitable unoccupied habitat at 3 x 6.5 acres per pair or single bird.~~	
98.	3.4.5.1	3.4-97 Lines 5-8	**Overall** The setting of the ISEGS is very similar to the Ivanpah Substation area as described in Section 3.4.1, "Environmental Setting." The ISEGS project is located wholly in California on undisturbed, natural land. This area is surrounded by both undisturbed and developed land, including the Primm Valley Golf Course, I-15, ~~an~~ existing transmission line<u>s</u>, and unpaved roads.	Please clarify that there are several transmission lines in the area.
99.	3.4.5.1	3.4-97 Lines 11-20	~~Although~~ An assessment of ephemeral and intermittent drainages and Waters of the State ~~(including jurisdictional determination by federal and state agencies)~~ ~~has~~ ~~not been completed~~ <u>was conducted for the EITP in spring 2010.</u> The general characteristics of the drainages within the EITP area are similar in form and function to those in the ISEGS area. The ISEGS project is sited on a broad bajada that extends from the base of the Clark Mountains to the western edge of Ivanpah Dry Lake. Within the ISEGS area, the drainages range from small (1 to 4 feet wide) to large (greater than 85 feet). A total of 291 miles of channels cover 198.72 acres. Most of the drainages are small. Based on initial delineations, no wetlands or riparian areas are within the ISEGS project area. The USACE determined that the ISEGS would not discharge dredged or fill material into a Water of the United States or an adjacent wetland, and therefore would not be subject to jurisdiction under Section 404 of the Clean Water Act. However, all of the ephemeral and intermittent drainages are considered Waters of the State of California.	Please not that the jurisdictional delineation survey was submitted on May 20, 2010.

EITP DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT (DEIR/EIS)
SOUTHERN CALIFORNIA EDISON COMPANY
COMMENTS & SUGGESTED REVISIONS

Section 3.5 Cultural Resources and Native American Values

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1.	3.5.1.2	3.5-4 Lines 10-12	It is likely that associated cultural resources such as trails, campsites, and other features associated with mining were in the general project area, outside the current Area of Potential Effects (APE), and may prove to be National Register of Historic Places (NRHP)-eligible resources.	Please clarify that these mining-related activities lie outside the project area.
2.	3.5.1.3	3.5-4 Line 28	3.5.1.3 Cultural Sites within Area of Potential Effect (APE)	Please add APE so that the reader knows that there are a finite number of resources inventoried as a result of cultural resources surveys.
3.	3.5.1.3	3.5-4 Lines 47-50	Although this site as a whole is eligible for listing in the NRHP, the short sections of the railroad line located within the project corridor are not recommended as contributing elements of the structure (Chambers Group 2009).	Consider adding reference for evaluation completed in support of EITP. 2009 Chambers Group, *Architectural Evaluation of Three Historic Sites (CA-SBR-1910H, CA-SBR-3048H, and CA-SBR-12980H) Southern California Edison Eldorado-Ivanpah Transmission Project San Bernardino County, California.* Evaluation Report submitted to BLM and CPUC in December 2009.
4.	3.5.1.3	3.5-5 Lines 4-5	At this point, the applicant intends to span over the LADWP Transmission Line using H-frame towers, thus avoiding any direct impacts to this resource.	Please clarify that there will not be any direct impacts to the LADWP Line as a result of construction activities.
5.	3.5.1.3	3.5-5 Line 34 (Insert)	~~This site has not been evaluated for NRHP eligibility.~~ The site was evaluated in 2010 and has been recommended as ineligible for inclusion in the NRHP (Thompson 2010).	Consider adding reference for evaluation completed in support of EITP. 2010 Thompson, Annette, J., *Letter Report: Evaluation of 26CK2633 in Support of Eldorado-Ivanpah Transmission Line Project*, Harry Reid Center for Environmental Studies.

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6.	3.5.1.3	3.5-5 Line 42	(CA-SBR-13132H)	Revise to add missing "3" to Trinomial.
7.	3.5.1.3	3.5-5 Lines 45-46	This site ~~does not appear eligible~~ is recommended as ineligible for listing in the NRHP; ~~however, a formal NRHP evaluation of site would be conducted if the Mountain Pass alternative is chosen for construction~~ (Sander and Auck 2009).	Consider adding reference for evaluation completed in support of EITP. 2009 Sander, Jay, K. & Jessica J. Auck, *Testing Report for Evaluation of Five Historic Archaeological Sites (CA-SBR-7802, CA-SBR-12981, CA-SBR 12982, CA-SBR-13232, and CA-SBR-13133) Southern California Edison Eldorado-Ivanpah Transmission Project San Bernardino County, California*, Chambers Group.
8.	3.5.1.3	3.5-5 Line 51	The site is recommended as not eligible for the NRHP (Sander and Auck 2009).	Consider adding reference to Sander and Auck report. See above.
9.	3.5.1.3	3.5-6 Lines 27-29	The portions of Old Traction Road that may be affected by the EITP development are not recommended as contributing elements of the resource (Chambers 2009).	Consider adding reference for evaluation completed in support of EITP. 2009 Chambers Group, *Architectural Evaluation of Three Historic Sites (CA-SBR-1910H, CA-SBR-3048H, and CA-SBR-12980H) Southern California Edison Eldorado-Ivanpah Transmission Project San Bernardino County, California*. Evaluation Report submitted to BLM and CPUC in December 2009.
10.	3.5.1.3	3.5-6 Lines 33-35	This site has been recommended not eligible for the NRHP due to disturbances associated with road maintenance, and the site testing results from the EITP investigations support this recommendation (Sander and Auck 2009).	Add reference for evaluation completed in support of EITP. 2009 Sander, Jay, K. & Jessica J. Auck, *Testing Report for Evaluation of Five Historic Archaeological Sites (CA-SBR-7802, CA-SBR-12981, CA-SBR 12982, CA-SBR-13232, and CA-SBR-13133) Southern California Edison Eldorado-Ivanpah Transmission Project San Bernardino County, California*, Chambers Group.

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11.	3.5.1.3	3.5-6 Lines 42-43	The roadway is recommended as not eligible for listing on the NRHP (Chambers 2009).	Consider adding reference for evaluation completed in support of EITP. 2009 Chambers Group, *Architectural Evaluation of Three Historic Sites (CA-SBR-1910H, CA-SBR-3048H, and CA-SBR-12980H) Southern California Edison Eldorado-Ivanpah Transmission Project San Bernardino County, California*. Evaluation Report submitted to BLM and CPUC in December 2009.
12.	3.5.1.3	3.5-7 Lines 4-5	However, the short sections of the railroad line located within the project corridor are not recommended as contributing elements of the structure (Chambers 2009).	Consider adding reference to Chambers report. See above.
13.	3.5.1.3	3.5-7 Line 17	It has been recommended not eligible for the NRHP (Sander and Auck 2009).	Consider adding reference for evaluation completed in support of EITP. 2009 Sander, Jay, K. & Jessica J. Auck, *Testing Report for Evaluation of Five Historic Archaeological Sites (CA-SBR-7802, CA-SBR-12981, CA-SBR 12982, CA-SBR-13232, and CA-SBR-13133) Southern California Edison Eldorado-Ivanpah Transmission Project San Bernardino County, California*, Chambers Group.
14.	3.5.1.3	3.5-7 Line 24	It has been recommended not eligible for the NRHP (Sander and Auck 2009).	Consider adding reference to Sander and Auck report. See above.
15.	3.5.1.3	3.5-7 Line 43	A search of the Native American Heritage Commission's Sacred Lands File (SLF) was conducted to determine ~~the~~ any known Native American cultural resources in the proposed project area.	Please revise and clarify when the search was conducted and by whom.
16.	3.5.3.4	3.5-13 Lines 21-23	If necessary, the applicant would assist BLM in consultations with Native Americans regarding traditional cultural values that may be associated with ~~archaeological resources~~ locations within the APE.	Consider clarifying. Traditional cultural values are not necessarily linked with archaeological resources, but rather locations that may be sacred to Native Americans.
17.	3.5.3.5	3.5-15 Line 19	Construction of the EITP ~~would~~ has the potential to impact cultural resources because of surface and subsurface ground disturbance.	Consider revising to clarify, as all studies show that only the Boulder Transmission Line will be adversely affected by construction.

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18.	3.5.3.5	3.5-15 Lines 31-35	The LADWP Boulder Transmission Line was determined eligible for the NRHP in 1994. The transmission line will not be altered by the project since the proposed line will be engineered at the crossing locations to avoid this resource. ~~The applicant intends to span over the line using H-frame towers, which would allow the EITP line to cross the historic LADWP line without impacting it. Any disturbance or destruction of the contributing elements to this resource would result in an impact.~~ All measures of APM CR-2a would help ensure that adverse effects/impacts would be avoided ~~or minimized~~.	Consider revising to reflect that the LADWP Boulder Transmission Line will not be directly impacted by construction. Indirect effects may occur if the setting of the line was altered by the Undertaking. The EITP, however, being a transmission project within an existing transmission right-of-way, will not alter the setting of the LADWP Line.
19.	3.5.3.5	3.5-16 Lines 3-4 (Insert)	~~This site has been recommended not eligible for the NRHP, so the EITP would not result in any impacts to this resource.~~ Because 36-13416 may share a historical association with the Boulder Dam 132-kV transmission line, it will also be included as part of APM CR-4b, even though it will not be affected by the EITP.	This telecommunications system would be deemed a contributing element within the Southern Sierras Power Company (SSPC) Boulder Line Historic District, which has been determined eligible for the NRHP.

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20.	3.5.3.5	3.5-16 Lines 10-13	The prehistoric lithic scatter, which contained debitage, one projectile point, and two biface fragments, was evaluated in February 2010 and recommended as ineligible for inclusion in the NRHP (Thompson 2010). ~~has not been evaluated for eligibility to be listed on the NRHP~~; Furthermore, ~~however,~~ the applicant plans to avoid this site entirely by implementing APMs CR-2, CR-2b, and CR-2c. Therefore, the EITP would not result in adverse impacts on this resource. ~~APMs CR-2, CR-2b, and CR-2c would also help ensure there would be no adverse impacts.~~	Consider adding reference for evaluation completed in support of EITP. 2010 Thompson, Annette, J., *Letter Report: Evaluation of 26CK2633 in Support of Eldorado-Ivanpah Transmission Line Project*, Harry Reid Center for Environmental Studies.
21.	3.5.3.5	3.5-16 Lines 45-49	~~Cultural resources may also be discovered on the surface of these sediments.~~ The rest of this segment passes over colluvial deposits and exposed bedrock of volcanic origin that has low potential for buried cultural resources or human remains, including those interred outside of formal cemeteries~~; however, cultural resources may be discovered on the surface of these sediments~~.	Please revise to reflect that the EITP APE has been surveyed intensively for cultural resources and is, therefore, unlikely to yield prehistoric artifacts/features on the surface of these sediments within the project APE.
22.	3.5.3.5	3.5-17 Lines 5-6	~~Cultural resources may also be discovered on the surface of these sediments.~~	Please consider revising. See comment above.
23.	3.5.3.5	3.5-17 Line 12	~~Cultural resources may also be discovered on the surface of these sediments.~~	Please consider revising. See comment above.
24.	3.5.3.5	3.5-17 Lines 24-26	Construction of the EITP would result in a direct, adverse, and permanent impact to ~~Cultural Resources~~ 36-10315 (CA-SBR-10315H) ~~and 36-7694 (CA-SBR-7694H)/26CK4957~~ by altering the setting and disturbing elements of the site that contribute to its historic significance.	Please consider revising to reflect that the LADWP Boulder Transmission Line will not be directly impacted by construction. Indirect effects may occur if the setting of the line was altered by the Undertaking. The EITP, however, being a transmission project within an existing transmission right-of-way, will not alter the setting of the LADWP Line.
25.	3.5.3.5	3.5-17 Lines 39-40	Impacts to Cultural Resource~~s~~ 36-10315 (CA-SBR-10315H) ~~and 36-7694 (CA-SBR-7694H/26CK4957~~	Please consider revising to reflect that the LADWP Boulder Transmission Line will not be directly impacted by construction. Indirect effects may occur if the setting of the line was altered by the Undertaking. The EITP, however, being a transmission project within an existing transmission right-of-way, will not alter the setting of the

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				LADWP Line.
26.	3.5.3.5	3.5-18 Line 20	Additionally, implementation of APM CR-2b would reduce these potential impacts to less than significant levels by educating the construction crew on the penalties associated with not reporting a cultural find or of collecting artifacts from federal- or state-controlled land.	Please consider revising, as APM CR-2b refers specifically to the WEAP Program.
27.	3.5.3.9	3.5-19 Lines 23-25	This alternative would result in significant adverse permanent impacts to 36-10315 (CA-SBR-10315H) ~~and 36-7694 (CA-SBR-7694H)/26CK4957~~ as described above under the proposed project by removing the line along the proposed route ~~altering the setting and disturbing the elements contributing to the historic significance of the sites.~~	Please consider revising to reflect that the LADWP Boulder Transmission Line will not be directly impacted by construction. Indirect effects may occur if the setting of the line was altered by the Undertaking. The EITP, however, being a transmission project within an existing transmission right-of-way, will not alter the setting of the LADWP Line.
28.	3.5.3.12	3.5-20 Line 25-28	Construction of the Mountain Pass Telecommunication Alternative would not ~~likely~~ result in impacts to cultural resources 36-014497 (CA-SBR-12981H), or 36-014498 (CA-SBR-12982H) because these sites have been recommended as ineligible for inclusion in the NRHP (Sander and Auck 2009). ~~appear ineligible for the NRHP, pending formal evaluation.~~ Impacts to cultural resource 36-7347 (CA-SBR-7347H) are unknown because no NRHP determinations have yet been made for the resource.	Please consider adding a reference for evaluation completed in support of EITP. 2009 Sander, Jay, K. & Jessica J. Auck, *Testing Report for Evaluation of Five Historic Archaeological Sites (CA-SBR-7802, CA-SBR-12981, CA-SBR 12982, CA-SBR-13232, and CA-SBR-13133) Southern California Edison Eldorado-Ivanpah Transmission Project San Bernardino County, California*, Chambers Group.
29.	3.5.4	3.5-21 Lines 9- 13	The qualified cultural resources specialist will conduct HAER recordation on Cultural Resources 36-10315 (CA-SBR-10315H) ~~and 36-7694 (CA-SBR-7694H)/26CK4957~~. HAER recordation will be conducted in accordance the Secretary of the Interior's Standards for Architectural and Engineering Documentation, following Documentation Criteria Level II. ~~, as appropriate, for the level of significance assigned to the resources.~~	Please consider revising to reflect that the LADWP Boulder Transmission Line will not be directly impacted by construction. Indirect effects may occur if the setting of the line was altered by the Undertaking. The EITP, however, being a transmission project within an existing transmission right-of-way, will not alter the setting of the LADWP Line.

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Section 3.6: Geology, Soils, Minerals, and Paleontology

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	3.6.1.1	3.6-1 Lines 45-47	Normal faulting is one of the most common types, exhibiting movement along a generally non-vertical plane such that the upper part moves downward along the plane causing an offsetting of the geologic unit(s).	Please revise.
2.	3.6.1.1	3.6-5 Line 14	In the valley bottoms and flat areas, latest Holocene to late Pleistocene playa deposits ~~of~~ are characterized as ….	Please revise.
3.	3.6.1.3	3.6-15 Line 50 and 3.6-16 Line 1	The proposed above ground portion of the Mountain Pass Telecommunications Line (attached to the existing Nipton 33-kV poles) intersects the Molycorp Mine, a large rare-earth mine near Mountain Pass, California, hereafter called the Mountain Pass Mine.	Please indicate that this section is above ground and no excavation is planned through the Molycorp Mine area.
4.	3.6.1.3	3.6-16 Line 34	There is some~~no~~ mining claim activity along this segment, no known mineral resource recovery ongoing near this segment, and no active mines are identified in the USGS MRDS database within 1,000 feet of this segment.	Please revise as noted. This alternative crosses one area with a moderate number of mining claims per Figure 3.6-3.
5.	3.6.1.3	3.6-19 Lines 5-8	*Golf Course Alternative* There is mining claim activity in the vicinity of this route, which consists of aboveground and underground fiber-optic cable. However, there is no known ongoing mineral resource recovery near this segment, and no active mines are identified in the USGS MRDS database within 1,000 feet of this segment. *Mountain Pass Alternative* There is mining claim activity in the vicinity of ~~these short conduit routes, but no known ongoing mineral resource recovery is near these segments, and no active mines are identified in the USGS MRDS database within 1,000 feet of~~	These two alternatives are unique geologically and should not be combined. It is important to indicate that this section is aboveground and no excavation is planned through the actively mined Molycorp Mine area.

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			~~these segment.~~this route, which consists of aboveground and underground fiber-optic cable. There is ongoing mineral resource recovery in the Mountain Pass portion of this segment with aboveground fiber-optic cable on existing poles and active mining is occurring within 1,000 feet of this segment.	
6.	3.6.3.5	3.6-30 Line 25	Slope stability (e.g., ~~L~~landslides and rockfall) effects are assessed in two distinct ways: 1) project development could destabilize a soil or geologic unit and induce a landslide; or 2) project components could be transported in a landslide and introduce additional risk or damage to people or the environment.	Please consider revising, in order to introduce the more general term "slope stability" to cover the two main forms of potential failure, landslides, and rockfall.
7.	3.6.3.5	3.6-30 Lines 48-51 and 3.6-31 Line 1	For example, the impact to existing surface topography related to subsidence due to groundwater withdrawal would be possible if substantial pumping were to occur related to development in the region; continued and/or increased groundwater withdrawal from the Ivanpah and Eldorado valleys may cause an overdraft condition resulting in settling of the ground surface due to compaction of underlying unconsolidated sediments resulting in unsafe changes in surface topography; and dehydration of clays between the soil surface and the water table causing local sinkholes due to fluctuations in hydrology.	Please consider revising. Since the potential for sinkholes in areas adjacent to Ivanpah Dry Lake is introduced in section 3.6.1.2, it should be carried in subsequent relevant sections.
8.	3.6.3.5	3.6-31 Lines 11-18	No mining of metallic deposits was identified within 1,000 feet of the proposed transmission line project area. Metallic and ~~N~~non-metallic deposits within the general project area include rare earth minerals from the Molycorp Mine, pumice, feldspar, limestone, and sand and gravel, with sand and gravel potential being the highest along the routes. There are a few past and current mining locations in the vicinity of the proposed project, but none identified in the USGS database as located within 1,000 feet of either side of the proposed transmission line route or alternative routes. Any adverse impacts to the availability of currently-identified mineral resources would be negligible; the potential resource is area-wide but would be only locally developed. The development of mineral deposits within the proposed project area would result in a less than significant impact to no impact without mitigation.	Please clarify that the transmission line does not pass within 1000 feet of the Molycorp Mine and that the rare earth minerals are metallic.

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9.	3.6.3.5	3.6-32 Lines 8-9	The proposed location of the substation is in an area that may be susceptible to subsidence caused by removal of groundwater, to sinkholes due to dehydration of clays between the soil surface and the water table, and to~~in an area of~~ expansive soil.	Please consider revising. The potential for sinkholes in areas adjacent to Ivanpah Dry Lake is introduced in section 3.6.1.2; therefore, it should be carried in subsequent relevant sections.
10.	3.6.3.5	3.6-33 Lines 37-42	No mining of metallic deposits was identified within 1,000 feet of the proposed project area, except the aboveground portion of the Mountain Pass Telecommunication Alternative would go through the Molycorp Mine. Non-metallic deposits within the general project area include rare earth minerals, pumice, feldspar, limestone, and sand and gravel, with sand and gravel potential being the highest along the routes. There are a few past and current mining locations in the vicinity of the proposed project, but other than the Molycorp Mine, none is located within 1,000 feet of either side of the proposed telecommunications line route or alternative routes.	Please indicate that this section of the project is aboveground, no excavation is planned through the actively mined Molycorp Mine area, and to clarify that the telecommunication line does pass within 1000 feet of the Molycorp Mine.
11.	3.6.3.5	3.6-34 Lines 19-20	Fault rupture, although very unlikely due to movement on the SFS or the Black Hills fault, ~~can~~could result in structural failure that poses a risk to people.	Please clarify that the potential for fault rupture is limited to two faults and the likelihood is low.
12.	3.6.3.5	3.6-34 Lines 26-29	Maintenance of service roads could expose people or structures to minor adverse slope stability (e.g., landslides and rockfall) ~~landslide~~ effects over the life of the proposed project. In addition, operation and maintenance activities could expose people and structures to landslide hazards during the life of the project. Geologic conditions along the transmission line route favorable to landslides would be expected to occur in areas on or adjacent to hill slopes (in the McCullough Mountains and the hills west of Primm), particularly where access roads have been built.	Please consider revising. The more general term "slope stability" should be used to cover the two main forms of potential failure, landslides, and rockfall.
13.	3.6.3.5	3.6-34 Lines 44-46	As part of MM GEO-1, the applicant will contact the California Department of Water Resources and the Nevada Division of Water Resources on an annual basis to determine if groundwater withdrawals in the area are causing ground subsidence or sinkholes. If subsidence or sinkholes are found and threatens any project facility, the applicant will develop a mitigation plan to prevent damage to structures.	Please consider revising. The potential for sinkholes in areas adjacent to Ivanpah Dry Lake is introduced in section 3.6.1.2; therefore, it should be carried in subsequent relevant sections.

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14.	3.6.3.5	3.6-35 Lines 49	Fault rupture, although very unlikely due to movement on the SFS or the Black Hills fault, could ~~can~~ result in structural failure that poses a risk to people.	Please clarify that the potential for fault rupture is limited to two faults and the likelihood is low.
15.	3.6.3.5	3.6-36 Lines 5-14	Maintenance of service roads could expose people or structures to minor adverse slope stability (e.g., landslides and rockfall) effects over the life of the proposed telecommunications line. In addition, operation and maintenance activities could expose people to landslide hazards during the life of the project. Geologic conditions along the telecommunications line route favorable to landslides would be expected to occur in areas on or adjacent to hill slopes (in the McCullough Mountains and the hills west of Primm), particularly where access roads have been built. Although these landslide-prone conditions would be local in extent, their potential for impact may extend over a long period of time. The impact of these conditions on the project would be less than significant with mitigation. Operation and maintenance of service roads would lead to continued ground disturbance that would result in sites of potential erosion, particularly in areas of hill slopes. These activities would continue to disturb the existing ground surface and natural drainage(s) over the entire life of the proposed project, causing minor adverse erosion-related impacts. However, with the implementation of proper engineering control measures, this impact would be less than significant with~~out~~ mitigation.	Please revise as noted. The more general term "slope stability" should be used to cover the two main forms of potential failure, landslides, and rockfall.
16.	3.6.3.5	3.6-36 Lines 19-22	Subsidence due to groundwater withdrawal is possible due to substantial pumping and ~~,~~ due to dehydration of clays between the soil surface and the water table; continued and/or increased groundwater withdrawal from the Ivanpah and Eldorado valleys could cause an overdraft condition resulting in the settling of the ground surface due to compaction of underlying unconsolidated sediments.	Please revise as noted. The potential for sinkholes in areas adjacent to Ivanpah Dry Lake is introduced in section 3.6.1.2; therefore, it should be carried in subsequent relevant sections.

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17.	3.6.3.5	3.6-39 Lines 23-27	Ground subsidence or collapse due to groundwater withdrawal or dehydration of clays between the soil surface and the water table could lead to the structural failure of the transmission line and telecommunication line towers and substation facility. This adverse impact on the project, ranging from negligible to minor, could be localized to extensive, depending on the degree to which continued and/or increased groundwater withdrawal from the Ivanpah and Eldorado valleys causes an overdraft condition or dehydration resulting in settling of the ground surface due to compaction of underlying unconsolidated sediments.	Please revise as noted. The potential for sinkholes in areas adjacent to Ivanpah Dry Lake is introduced in section 3.6.1.2; therefore, it should be carried in subsequent relevant sections.
18.	3.6.3.5	3.6-40 Lines 1-3	There are a few past and current mining locations in the vicinity of the proposed project, but none, except the aboveground portion of the Mountain Pass Telecommunications Alternative, is within 1,000 feet of either side of the proposed telecommunications line route. The Molycorp Mine is within 1000 feet of the Mountain Pass telecommunications line ~~or a~~alternative route~~s~~.	Please indicate that this section of the project is aboveground in the actively mined Molycorp Mine area and to clarify that the telecommunication line does pass within 1000 feet of the Molycorp Mine.
19.	3.6.5.1	3.6-44 Lines 43-45	The potential for surface rupture on a fault at any of the three power plant sites (Ivanpah 1, 2, and 3) is very low since no active or potentially active faults are known at~~to have ruptured~~ the ground surface of the proposed ISEGS location.	Please clarify that any faults found on maps through this area are not active or potentially active, thereby not presenting a hazard. Also, such faults may not have ruptured the existing ground surface.
20.	3.6.4	3.6-44 Line 4	**MM GEO-1: Monitor and Mitigate Damage to Tower Structures.** If physical evidence proves groundwater withdrawals are threatening tower locations, SCE would contact the California Department of Water Resources and the Nevada Division of Water Resources ~~on an annual basis to determine if groundwater withdrawals are threatening to cause ground subsidence within the project area~~ to determine groundwater levels. ~~If subsidence threatens tower locations~~ If necessary, SCE ~~will~~ would develop a plan to mitigate potential damage to tower structures using standard foundation remediation techniques available	Consider deleting this measure as SCE has operations and maintenance policies to maintain foundations and structures. However, if **MM GEO-1** is not removed, please consider revising the mitigation to reflect this language.

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Section 3.7: Hazards, Health, and Safety

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	3.7.1	3.7-1 Line 38 (Insert)	**Hazardous Waste:** A waste may be considered hazardous if it exhibits certain hazardous properties ("characteristics") or if it is included on a specific list of wastes the U.S. Environmental Protection Agency (U.S. EPA) has determined are hazardous ("listing" a waste as hazardous). U.S. EPA's regulations in the Code of Federal Regulations (CFR) define four hazardous waste characteristic properties: ignitability, corrosivity, reactivity, and toxicity (40 CFR 261.21-261.24; U.S. EPA 2010a). Additionally, in California, a waste is considered a hazardous waste if it's listed in Title 22, CCR Section 66261.126 Appendix 12 (b) in the List of California Hazardous Waste Codes.	Please revise to recognize California's regulations on hazardous waste.
1.	3.7.1.2 Table 3.7-2	3.7-4	Atc-Mountain Pass #89344 Bailey Road 16n 13e Sec 11 Mountain Pass Permitted ~~UST~~ AST Active Permit Approx. 0.5 miles west of Mountain Pass Telecom. Alternative	Please revise. Cal Trans has an AST not a UST.
2.	3.7.1.6	3.7-8/ Line 31	The apparent power (measured in multiples of ~~watts~~ volt-amperes [VA]) passing through a transmission line is determined by the transmission line's voltage and the current, which is measured in amperes, or amps.	Please revise to reflect that volt-amperes is the proper measurement for calculating apparent power.
3.	3.7.1.6	3.7-10/ Line 3	The potential health effects of EMFs from power lines have been researched for more than ~~20~~ 40 years.	Please revise, as EMF research has been active for over 40 years to date.
4.	3.7.1.6	3.7-12/ Line 5	These reviews include those prepared by international agencies such as the World Health Organization (WHO) (WHO 1984, 1987, ~~and~~ 2001 and 2007),	Please revise to reflect that the WHO has released an update to the 2001 review in 2007. This is the most current review of the research available by the WHO.
5.	3.7.5.3	3.7-38/ Line 34	Nuisance shocks may also occur from human contact ~~from the energized lines~~ with large surface area metallic objects charged by the electric field.	Consider revising because this more accurately depicts nuisance shocks.

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6.	3.7.5.3	3.7-38/ Line 42-43	~~COC TLSN-2 is intended to validate the ISEGS applicant's assumed reduction efficiency.~~	See comments for TSLN-2 Mitigation Measure.
7.	3.7.5.3	3.7-39/ Line 12-15	~~TLSN-2 requires that the applicant use a qualified individual to measure the strengths of the electric and magnetic fields from the line at the points of maximum intensity before and after energizing according to the American National Institute Standards/Institute of Electrical and Electronics Engineers standard procedures. These measurements must be completed no later than 6 months after the start of operations.~~	Please clarify that TLSN-1 through TLSN-4 are Conditions of Certification imposed by the CEC on the ISEGS applicant, not SCE. Further, please delete TLSN-2, as Mitigation Measure TLSN 2 requires inappropriate pre- and post-construction magnetic field measurements to assess the effectiveness of the field reduction measures utilized in the Proposed Project design. Such measurements are not an appropriate method to conduct this assessment, and this mitigation measure should be removed. The measure is not appropriate because magnetic fields vary with time and electrical demand. Therefore, the before and after measurements required by this mitigation measure will depend more on when the measurements are taken and load conditions and less on the effectiveness of the field reduction measures. The CPUC recognized this in Decision 06-01-042 stating, "…post construction measurement of EMF in the field cannot indicate the effectiveness of mitigation measures used…" (Page 10) and specifically declined to order pre- and post construction measurements for transmission and substation projects. To overcome the limitations of doing pre- and post measurements, SCE utilizes computer models using the same load conditions to assess the effectiveness of field reduction measures. This allows a like-for-like comparison of the field reduction measures that field measurements do not allow. The CPUC validated SCE's modeling methods in Decision 06-01-042 stating, "Our [CPUC] review of the modeling methodology provided in the utility [EMF] design guidelines indicates that it accomplishes its purpose, which is to measure the relative differences between alternative mitigation measures. Thus, the modeling indicates relative differences in magnetic field reductions between different transmission line

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				construction methods, but does not measure actual environmental magnetic fields." (Page 10)
8.	3.7.1.6	3.7-8 - 3.7-15	~~3.7.1.6~~ 2.4.10 Electromagnetic Fields	The EMF section should be moved from 3.7 Hazards, Health, and Safety to 2.4 Project Construction as a new section 2.4.10-Electromagnetic Fields. Since EMF is not a public health and safety issue or a potential cumulative impact, it is better fit to be discussed in Chapter 2 Project Construction.
9.	3.7.3.5	3.7-26 Line 7	Sulfur hexafluoride (SF6) gas (dielectric medium)	Please revise to provide consistency of term (see p. 2-90) and also provide clarity as to what this substance is.
10.	3.7.3.5	3.7-27 Line 21	Portions of the EITP ~~could~~ may be located close to existing underground pipelines and would cross ~~below~~ under existing overhead powerlines.	Regarding the natural gas pipeline, only Alt C would be located close (within 0.5 miles) to the existing pipeline (see Figure 2-3a, Map 2 of 5, milepost 3, p. 2-15 or Map 3 of 5, p. 2-17.) Otherwise, the proposed route would be over 1.5 miles away from pipeline. The proposed route would cross below overhead powerlines (i.e., LADWP Eldorado–McCullough (500-kV), LADWP Mead–Victorville (287-kV), LADWP McCullough–Victorville 1 (500-kV), LADWP McCullough–Victorville 2 (500-kV), LADWP Intermountain–Adelanto (500-kV), and Nevada Power Powerline (115-kV) – as specified in Section 2.2.1.2 on p. 2-10.
11.	3.7.3.5	3.7-28 Lines 26-27	Brushing activities for vegetation control and ~~removal~~ clearance during construction could ~~result in fire~~ present a fire hazard if the vegetation debris is not removed from areas of welding.	Please revise as noted.
12.	3.7.3.5	3.7-29 Lines 38-40	The applicant's SPCC Plan and Hazardous Materials Business Plan (APM HAZ-5) would also help ensure that the applicant would minimize, avoid, and/or clean up spills of hazardous materials.	Please specify measure as an APM.
13.	3.7.3.8	3.7-31 Line 38	Several of ~~these~~ the existing overhead utility lines might have to be modified or relocated to accommodate this alternative.	Please specify "existing" overhead lines.

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14.	3.7.5.3	3.7-38 Line 34	Nuisance shocks may also occur from human contact ~~from the energized lines~~ with large surface area metallic objects charged by the electric field.	Please revise as shown.

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Section 3.8: Hydrology and Water Quality

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	3.8.1.1	3.8-3	Figure 3.8-1 Hydrology and Physiography~~logy~~ Around the Proposed Project	Please make global change to term.
2.	3.8.1.4	3.8-9 Lines 18-21	This basin is confined by the Clark Mountains to the northwest, the Ivanpah Range to the west, the New York Mountains to the ~~southwest~~southeast, and the Lucy Gray Mountains to the east. This groundwater basin consists of Quaternary alluvium deposits up to 825 feet thick bound by northwest-trending faults. ~~As with surface drainage, g~~ Groundwater flows northward and is discharged via pumping and underflow to Las Vegas Valley (CDWR 2004).	The direction of the mountains and the surface drainage direction require correction.
3.	3.8.1.4	3.8-9 Lines 45-47	One U.S. Geological Survey~~ervice~~ (USGS) monitoring well is present near the proposed project area near Jean, Nevada. The well has been monitored since September 1990. Typical well elevations are between 535 and 595 feet below ground surface. This well samples the Ivanpah Valley sub-basin of the Basin and Range Aquifer (USGS 2009).	Please verify the 535 and 595 groundwater depths. The PEA indicates groundwater depths of 100 to 350 feet in the Ivanpah Valley Groundwater Basin. The coordinates of the referenced USGS well is located west of Jean, the referenced well could not be located.
4.	3.8.1.5	3.8-10 Lines 24-28	Presently, a maximum of 252 acre-feet per year (acre-ft/yr) of water is reclaimed/recycled from non-potable sources in the Primm area. Some of this could be used for the Bighorn Power Plant, a 580-MW combined-cycle gas-fired power plant located in Primm. The Bighorn Power Plant currently uses reclaimed water supplied by the Primm wastewater treatment plant as its primary water source (NDEP 2008). An additional 3 acre-ft/yr is supplied by a groundwater well on the power plant site. With respect to existing groundwater production in the Ivanpah Valley Groundwater Basin, municipal and industrial wells have yielded on	Please revise as shown to provide context for the amount of reclaimed and ground water available in the Primm area and it is also important to understand how much groundwater is being, or can be, pumped out of the Ivanpah Valley Groundwater Bain near Primm.

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			average approximately 400 gallons per minute (CDWR 2004).	
5.	3.8.2.3	3.8-15 (also 3.8-17) Lines 22-29	~~Basin management for the proposed project area is administered by the Mojave Water Agency in San Bernardino County and the Southern Nevada Water Authority in Clark County. The Mojave Water Agency Regional Water Management Plan was developed in 1994 and is still in place (CDWR 2004)~~. A primary mandate of these entities is to ensure long-term public water supply by protecting surface water and groundwater resources, including supply, storage, recharge capability, and chemical quality. The applicant would confer with ~~the Mojave Water Agency and~~ Southern Nevada Water Authority during implementation of the proposed project to ensure protection of groundwater resources and compliance with any established groundwater management plans, and, if necessary, to secure permits needed for encroachment on water district easements.	Please verify that the Mojave Water Agency (MWA) boundary does include this area. This information should be verified globally throughout DEIR/EIS (e.g., Section 3.8-16).
6.	3.8.2.3	3.8-17 Lines 6-8	~~Basin management for the Ivanpah Valley (the California portion of the proposed project) is administered by the Mojave Water Agency in San Bernardino County. A Regional Water Management Plan was developed in 1994 and is still in place (DWR 2004). As discussed above, a primary mandate of the agency is to ensure long-term public water supply. The applicant would confer with the Mojave Water Agency during implementation of the proposed project to ensure protection of groundwater resources and compliance with any established groundwater management plans and, if necessary, to secure permits needed for encroachment on water district easements.~~	Please verify that the Mojave Water Agency (MWA) boundary does include this area. This information should be verified globally throughout DEIR/EIS (e.g., Section 3.8-16).
7.	3.8.3.5	3.8-24 Lines 28-36	The proposed project could have small impacts on the local ~~water table~~groundwater levels and on aquifer recharge processes by altering surface water drainages and increasing~~exceeding current~~ groundwater withdrawal over current conditions. Construction activities could modify~~shift~~ ~~sub~~surface hydrology in such a way that local wells or aquifers might not receive groundwater inputs at the same rate as prior to construction. The small ~~I~~increase~~d~~ in impermeable surfaces at the Ivanpah Substation could	Please revise as shown.

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			limit surface water absorption processes locally. The altered runoff patterns ~~s~~should not affect~~decrease~~ local groundwater supply and recharge or~~and~~ deplete water available for surface waterbodies. Since transmission line construction would replace existing structures, construction would not change the existing impervious area. The construction and operation of the new Ivanpah Substation would result in an increase in impervious area, but this area would be ~~relatively~~small relative to the surrounding pervious area, which ~~e~~would continue to receive the surface water runoff.	
8.	3.8.3.5	3.8-24 Lines 42-47	~~However, because the source of the water to be used during construction is currently unknown, at this point the possibility that the impact on groundwater supplies could e significant must be considered.~~ The applicant has provided information regarding the source of water to be used. This information indicates that impacts to groundwater supplies would be less than significant.	Consider revising to reflect information provided by SCE on this issue. Please see attached data request responses, attached hereto as Appendix B.
9.	3.8.4	3.8-30-9	**MM W-6: DESCP, SWPPP, and Erosion Control Plan for Ivanpah Substation.** ~~The CEC is the lead agency for the ISEGS project. In order to ensure protection of water quality during construction and operation of the ISEGS project, the CEC is requiring ISEGS to prepare and submit a Drainage, Erosion, and Sedimentation Control Plan (DESCP) and to prepare a SWPPP. As part of MM W-6,~~ The applicant will be required to submit copies of the approved Drainage, Erosion, and Sedimentation Control Plan (DESCP) and Storm Water Pollution Prevention Plan (SWPPP) to CPUC three months prior to the start of construction, and implement those plans as part of the EITP. Additionally, the applicant would develop and implement an Erosion Control Plan for construction activities. Copies of the Erosion Control Plan would be submitted to the CPUC. The intent of this MM is to minimize the impact of construction on surface water quality in the basins surrounding the proposed project.	Consider revising to reflect that SCE will obtain its own DESCP and SWPPP for construction activities. A SWPPP monitor would install and maintain BMPs, provide training and monitor compliance. Please consider adding the Erosion Control Plan into this MM as it is a related document to the DESCP and SWPPP and would contain the same BMPs as the erosion control section of the SWPPP. Please consider deleting MM W-1, see below
10.	3.8.4	3.8-29-12	~~**MM W-1: Erosion Control Plan and Compliance with**~~	Please consider deleting this mitigation measure as

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			~~**Water Quality Permits.** The applicant will employ a professional engineer to develop and implement an Erosion Control Plan and monitor construction activities to ensure compliance with federal and state water quality permits. The Erosion Control Plan will comply with or exceed BMPs commonly used on projects in the California/Nevada area and those outlined in county plans. Copies of the Erosion Control Plan will be submitted to CPUC. The intent of this MM is to minimize the impact of construction on surface water quality in the basins surrounding the proposed project. This MM will apply to all construction sites for the duration of construction and restoration activities.~~	the requirement to prepare an Erosion Control Plan was inserted into MM W-6. Please see comment above. Please note that a monitor for the Erosion Control Plan would not be necessary because the SWPPP monitor would perform the necessary monitoring.
11.	3.8.5.3	3.8-35 Lines 22-23	If the extraction of groundwater were to change the ~~topography of~~ the local subsurface ~~water table~~groundwater gradients (depth and slope of the groundwater surface), it could result in the plume flowing in a different direction.	Please change to clarify.

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Section 3.10: Noise

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	3.10.2	3.10-7 Line 13 (Insert)	Add at line 13: FTA guidelines for assessing the impacts of groundborne vibration are expressed in terms of the "vibration level," (VdB) or peak particle velocity (PPV). The threshold of perception as expressed by FTA is 65 VdB. The FTA criteria for evaluating residential uses near proposed facilities that generate vibrations during both day and nighttime hours over the life of the facility is 72 VdB for frequent events (greater than 70 times per day) and 80 VdB for infrequent events (less than 30 times per day). (FTA 2006).	Please revise to incorporate FTA guidance on vibration.
2.	3.10.3.2	3.10-10 Lines 24-27	b. cause the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels (vibration of approximately 75 vibration velocity level in decibels [VdB]) is generally considered intrusive for residential uses) Vibration velocity levels are commonly reported in decibels relative to a level of 1x10-6 inches per second and denoted as VdB;	Please see FTA guidance for evaluation of vibration effects, incorporated above.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
3.	3.10.4	3.10-18 Line 24	**MM NOI-1: Conduct Construction Activities during Daytime Hours.** The applicant ~~will conduct construction activities only during daytime hours (7 a.m. to 7 p.m.) while in the vicinity of the Desert Oasis Apartment Complex~~ would conduct construction activities during times that comply with the local noise ordinance. If construction is necessary outside of the local noise ordinance, a variance would be obtained from the appropriate city or county.	Please consider including language that SCE would be in compliance with the local ordinance and a variance would be obtained if work is expected outside of those hours.
4.	3.10.4	3.10-18 Line 29	~~**MM NOI-3: Turn off Idling Equipment.** The applicant will turn off idling equipment when not in use.~~	Please consider removing as noise and emissions from idling equipment is minimal and turning equipment on more frequently could increase NOx and PM emissions.
5.	3.10.4	3.10-18 Line 32	~~**MM NOI-5: Install Acoustic Barriers.** The applicant will install acoustic barriers around stationary construction noise sources near sensitive receptors.~~	Please consider removing since SCE would be in compliance with the local ordinances and would use necessary measures to comply with those ordinances.

EITP DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT (DEIR/EIS)
SOUTHERN CALIFORNIA EDISON COMPANY
COMMENTS & SUGGESTED REVISIONS

Section 3.11: Public Services and Utilities

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	3.11.3.5 CEQA Significance Determinations	3.11-11 Lines 4-19	~~**IMPACT PUSVC-2: Project construction temporarily increases water use, and project operation contributes to increased long-term water consumption.**~~ ~~*Potentially significant*~~ ~~As discussed in Section 3.8, "Hydrology and Water Quality," the applicant has estimated that between 30.6 and 38.3 acre-feet per annum would be needed for the construction phase of the transmission line. Because there is a limited water supply in the proposed project area, the applicant would implement MM W-2, which requires preparation of a project-specific Water Use Plan, specifying the quantities and sources for all water to be used during construction, operation, and maintenance of the proposed project. The Water Use Plan would also identify the source and approximate quantity of water to be used for each activity, broken down by phase of the project, and for each source, the plan would address the potential impact on the local aquifer. In addition, MM W-2 also sets maximum water use limits for the construction and operation phases. However, because the source of the water to be used during construction is currently unknown, at this point the possibility that the impact on groundwater supplies could be significant must be considered. For more information on water use and consumption, specifically as it relates to the potential for lowering the water table in the project area, see Impact HYDRO-2 in Section 3.8, "Hydrology and Water Quality."~~	Please revise as shown. The new text addresses CEQA impact criteria "e" as listed in Section 3.11.3.2 and below. e. The proposed project would have a significant impact if it would not have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements. See also comments on Section 3.8 Hydrology and Water Quality.

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
			IMPACT PUSVC-2: Project would have sufficient water supplies to serve the Project from existing entitlements and resources *Less than significant* The Project would have sufficient water supplies available to serve the Project from existing entitlements and resources, or require new or expanded entitlements. The only demand for water would be for use by construction workers and water brought in for dust control. Potable water for drinking and portable restrooms would be brought in for construction, and disposed of accordingly. Non-potable water would be transported to the various construction areas for dust-suppression purposes. The Proposed Project and alternatives, during construction and operation, would have a less than significant impact on water supplies. Potential impacts to groundwater and associated mitigation measures are discussed in Section 3.8, "Hydrology and Water Quality."	

EITP DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT
SOUTHERN CALIFORNIA EDISON COMPANY
COMMENTS & SUGGESTED REVISIONS

Section 5.3: Cumulative Impacts Analysis

No.	Section/ Appendix	Page	Draft EIR/EIS Text Revision	Justification
1.	5.3.4.1	5-51 Line 36-38	Because this is a linear resource that exists outside the geographic scope described above, geographic scope for the cumulative impacts analysis for this specific resource comprises the entire ROW of the transmission line from Calelectric Substation in San Bernardino to Eldorado Substation. ~~Victorville to Hoover Dam.~~	Please revise to reflect that extant portions of the line only run between the two substations noted in the changes.
2.	5.3.4.2	5-52 Line 6	Land sailing activities that occur at Ivanpah Dry Lake may come into contact with cultural resources on the dry lake bed, resulting in damage or alter~~n~~ation of sites or isolated finds.	Please revise. SCE is unaware of any cultural resources on the Dry Lake.
3.	5.3.4.4	5-53 Line 2	The relevant impact of the proposed project is IMPACT CR-1: Impacts to Cultural Resource 36-10315 (CA-SBR-10315H)/53-8280 (Boulder Dam to San Bernardino 132-kV Transmission Line). ~~and~~ 36-7694 (CA-SBR-7694H)/26CK4957 (LADWP Boulder Transmission Line) will be avoided by the EITP.	Please revise to clarify.
4.	5.3.4.4	5-54 Line 16-19	Ground disturbing activities associated with the construction of the reasonably foreseeable future project could result in impacts to these resources by demolishing, destroying, or altering the resource and its immediate surroundings in a way that dimi~~ni~~shes its integrity and impairs its ability to be considered for listing in the NRHP ~~NRUP~~ or the CRHR.	Please correct acronym.

APPENDIX A

REFERENCED TABLES

Table 2-9 Proposed Construction Yards and Helicopter Staging Locations

No.	Location	MP	Distance to ROW (miles)	Current Condition	Area (acres)[1]
CY 1	Eldorado Substation, NV	0	0	Previously disturbed	9.8
CY 2	Jean, NV	15	11.5	Previously disturbed	13.6
CY 3	Generating Station Yard, NV	27	0.4	Previously disturbed	16.5
CY 4	Primm Valley Casino Vacant Lot, NV	28	0.1	Previously disturbed	28.3
CY 5	Whiskey Pete's Casino Vacant Lot, NV	28	1.1	Previously disturbed	2.4
CY 6	BrightSource Generating Station Yard, CA	35	0	Unknown (public land)[2]	10+
CY 7	Nipton, CA [3]	n/a	4.7	Previously disturbed	2.5
~~HL~~ FY 1	Helicopter Fly Yard -1 (East of McCollough Pass)	9	0.2	Not disturbed [4]	~~3.6~~ 5.0
~~HL~~ FY 2	Helicopter Fly Yard - 2 (West of McCollough Pass)	15	0.01	Not disturbed [4]	5.7

Source: SCE 2009
Notes:
[1] Approximate areas based on current design
[2] Only Construction Yard #6 is located on public (BLM) land
[3] Construction Yard #7 is proposed for tower retrofit activities
[4] Based on aerial imagery
Key:
CY = Construction Yard
~~HL~~ FY = Helicopter ~~Landing site~~ Fly Yard
n/a = not applicable

Table 2-11 230-kV Transmission Line Estimated Land Disturbance

Project Feature	Quantity	Each Disturbed Area (L x W)	Acres Disturbed during Construction	Acres Temporarily Disturbed	Acres Permanently Disturbed
Remove existing lattice steel H-frame (1)	208	150 feet x 75 feet	53.7	53.7	0.0
Remove existing lattice steel structure (1)	13	150 feet x 75 feet	3.4	3.4	0.0
Remove existing wood H-frame (1)	23	100 feet x 75 feet	4.0	4.0	0.0
Remove existing wood pole (1)	6	100 feet x 75 feet	1.0	1.0	0.0
Construct new lattice steel suspension structure (2)	178	200 feet x 200 feet	163.5	137.6	25.9
Construct new lattice steel dead-end structure (2)	35	200 feet x 200 feet	32.1	25.6	6.5
Construct new lattice steel heavy dead-end structure (2)	3	200 feet x 200 feet	2.8	2.2	0.6
Construct new tubular steel double H-frame (3)	21	200 feet x 200 feet	19.3	15.4	3.9
115-kV conductor removal and 230-kV conductor and optical ground wire stringing setup area – puller (4)	23	200 feet x 150 feet	15.8	15.8	0.0
115-kV conductor removal and 230-kV conductor and optical ground wire stringing setup area – tensioner (4)	24	500 feet x 150 feet	41.3	41.3	0.0
230-kV conductor splicing setup areas (4)	12	150 feet x 100 feet	4.1	4.1	0.0
New access roads (5)	~~0.0~~ 1.2 miles	Miles x 14 feet	~~0.0~~ 2.0	0.0	~~0.0~~ 2.0
New spur roads (5)	~~1.2~~ 1.7	Miles x 14 feet	~~2.4~~ 2.9	0.0	~~2.4~~ 2.9

Table 2-11 230-kV Transmission Line Estimated Land Disturbance

Project Feature	Quantity	Each Disturbed Area (L x W)	Acres Disturbed during Construction	Acres Temporarily Disturbed	Acres Permanently Disturbed
	miles				
El Dorado Substation material and equipment staging area	1	9.8 acres	9.8	9.8	0.0
Jean, Nevada – material and equipment staging area	1	13.6 acres	13.6	13.6	0.0
General Construction Yard – material and equipment staging area	1	16.5 acres	16.5	16.5	0.0
Primm Valley Casino vacant lot – material and equipment staging area	1	28.3 acres	28.3	28.3	0.0
Whiskey Pete's Casino vacant lot – material and equipment staging area	1	2.4 acres	2.4	2.4	0.0
ISEGS construction station – material and equipment staging area	1	10 acres	10.0	10.0	0.0
Helicopter Fly Yard – 1 (East)	1	5.0 acres	5.0	5.0	0.0
Helicopter Fly Yard – 2 (West)	1	5.7 acres	5.7	5.7	0.0
Total [6]			~~424.0~~ 438.6	~~386.1~~ 396.8	~~39.3~~ 41.8

Notes:
[1] Includes removing existing conductor, tearing down existing structure, and removing foundation 2 feet below ground surface.
[2] Includes installing foundation, assembling and erecting structure, installing conductor and optical ground wire. Area to be restored after construction. The portion of ROW within 25 feet of the lattice steel structure to remain cleared of vegetation would be permanently disturbed for each structure (suspension = 0.145 acre; dead-end = 0.187acre; heavy dead-end = 0.188 acres).
[3] Includes assembling and erecting structure, installing conductor and optical ground wire; area to be restored after construction includes a portion of ROW within 25 feet of the tubular steel double H-frame to remain cleared of vegetation; 0.185 acres would be permanently disturbed for each tubular steel double H-frame.
[4] Based on 9,000-foot conductor reel lengths, number of circuits, and route design.
[5] Quantity of this item is provided in linear miles, based on the expected length of road (in miles) and a road width of 14 feet.
[6] The disturbed acreage calculations are estimates based on the applicant's preferred area of use for the described project feature, the width of the existing ROW, or the width of the proposed ROW. These estimations are based on preliminary design information and are subject to revision based on final engineering and review.

Table 2-13 Distribution Line Loop Estimated Land Disturbance

Project Feature	Quantity	Each Disturbed Area (L x W)	Acres Disturbed during Construction	Acres Temporarily Disturbed	Acres Permanently Disturbed
Underground trench/duct for conduit [(1)]	1	~~2,600 feet x 1.5 feet~~ 4800 feet x 2 feet	~~0.09~~ 0.22	~~0.09~~ 0.22	0.00
Underground manhole installation	~~4~~ 6	10 feet x 15 feet	~~0.01~~ 0.02	~~0.01~~ 0.02	0.00
Work area for underground ~~manholes~~ pulling area	~~4~~ 6	40 feet x 60 feet	~~0.11~~ 0.33	~~0.11~~ 0.33	0.00
Work area pulling of 3/8 mile of 1/0 ACSR pole line construction	~~2~~ 10	40 feet x 60 feet	~~0.17~~ 0.55	~~0.17~~ 0.55	0.00
Total			**~~0.37~~ 1.12**	**~~0.37~~ 1.12**	**0.00**

Note:
[(1)] Underground trench is approximately ~~1.5~~ 2.0 feet wide at most and ~~2,600~~ 5,280 feet long from the existing transformer to the proposed new underground dip pole. All construction is along existing paved and dirt roads at the perimeter of the Primm Valley Golf Course.
Key: ACSR = Aluminum Conductor Steel Reinforced

Table 2-22 Summary of Land Disturbances and Comparison between Alternatives						
Project Feature	**Proposed Route**	**Transmission Line Alternative Route A**	**Transmission Line Alternative Route B**	**Transmission Line Alternative Route C**	**Transmission Line Alternative Route D**	**Transmission Line Subalternative Route E**
Permanent Land Disturbance (acres)						
Transmission line ROW (1)	36.8	35.5	41.3	37.9	36.9	37.0
New ROW (route alternatives only)	N/A	4.9	7.3	5.3	3.2	2.9
Access roads	~~0~~ 2.0	~~0~~ 3.9	0	1.7	0	0
Spur roads	~~2.4~~ 2.9	~~6.8~~ 0.9	0.6	0.8	0.3	0.3
Ivanpah Substation (2)	0	0	0	0	0	0
Eldorado Substation (3)	0	0	0	0	0	0
115-kV subtransmission line	1.0	1.0	1.0	1.0	1.0	1.0
33-kV distribution line	0.0	0.0	0.0	0.0	0.0	0.0
Telecommunication system (3)	11.0	11.0	11.0	11.0	11.0	11.0
Project with Microwave Path (4)	**~~51.2~~ 53.7**	**~~59.2~~ 57.2**	**61.2**	**57.7**	**52.4**	**52.2**
Golf Course Alternative (5)	**~~51.3~~ 53.8**	**~~59.3~~ 57.3**	**61.3**	**57.8**	**52.5**	**52.3**
Mountain Pass Alternative (6)	**~~51.3~~ 53.8**	**~~59.3~~ 57.3**	**61.3**	**57.8**	**52.5**	**52.3**
Temporary Land Disturbance (acres)						
Transmission line construction (1)	242.9	273.7	305.0	286.6	282.0	282.0
Alternate route segments	N/A	24.5	34.0	25.9	16.1	14.5
Construction yards,~~and~~ pulling and tensioning sites, and helicopter fly yards	~~141.8~~ 152.5	~~149.1~~ 159.8	~~175.5~~ 186.2	~~151.8~~ 162.5	~~146.6~~ 157.3	~~146.6~~ 157.3
Ivanpah Substation (2) (3)	0	0	0	0	0	0
115-kV subtransmission line	7.3	7.3	7.3	7.3	7.3	7.3
33-kV distribution line	~~0.4~~ 1.1	~~0.4~~ 1.1	~~0.4~~ 1.1	~~0.4~~ 1.1	~~0.4~~ 1.1	~~0.4~~ 1.1
Telecommunication system (3)	22.1	22.1	22.1	22.1	22.1	22.1
Project with Microwave Path (4)	**~~414.9~~ 425.9**	**~~477.1~~ 488.5**	**544.3 555.7**	**~~494.1~~ 505.5**	**~~474.5~~ 485.9**	**~~472.9~~ 484.3**
Golf Course Alternative (5)	**~~424.2~~ 435.6**	**~~486.4~~ 497.8**	**~~553.6~~ 565.0**	**~~503.4~~ 514.8**	**~~483.8~~ 495.2**	**~~482.2~~ 493.6**

Table 2-22 Summary of Land Disturbances and Comparison between Alternatives						
Project Feature	**Proposed Route**	**Transmission Line Alternative Route A**	**Transmission Line Alternative Route B**	**Transmission Line Alternative Route C**	**Transmission Line Alternative Route D**	**Transmission Line Subalternative Route E**
Mountain Pass Alternative [6]	~~**424.4**~~ **435.8**	~~**486.6**~~ **498.0**	~~**553.8**~~ **565.2**	~~**503.6**~~ **515.0**	~~**484.0**~~ **495.4**	~~**482.4**~~ **493.8**

Notes:
[1] Does not include overlapping area between structure removal and new structure installation.
[2] Grading and other ground-disturbing activities of the Ivanpah Substation site would be approved under the ISEGS project, currently under environmental review.
[3] Telecommunication equipment to be installed within the existing fence line. Areas occupied by facilities installed within existing substation and communications site properties are not included in estimates.
[4] Includes proposed Telecommunication Line Path 1 and Path 2 Sections 1, 2, and 3 (Microwave Path).
[5] Golf Course Telecommunication Alternative: Path 1 and Path 2 Sections 1 and 2 and Golf Course segment.
[6] Mountain Pass Telecommunication Alternative: Path 1 and Path 2 Sections 1 and 2 and Mountain Pass segment.

Table 2-23 Construction Workforce Required for the Proposed Project

Project Component	Summary of Construction Activities	Total Estimated Workforce	Estimated Schedule (days)
230-kV transmission line	Conducting pre-construction surveys Establishing construction yards and helicopter landing areas Conducting road work Installing guard structures Removing existing conductors, structures, foundations, and wood poles Installing lattice steel towers and H-frames Installing conductor Removing guard structures Restoring temporary construction areas and roads	209	1,257
115-kV subtransmission line	Conducting pre-construction survey Conducting road work Removing existing H-frame poles and foundations Installing tubular steel poles Installing lightweight steel poles Installing overhead shield wire	69	35
33-kV distribution line	Trenching Installing overhead line Installing underground cable	20	73
Ivanpah Substation	Conducting pre-construction survey Grading substation site Installing civil and electrical components	22	175
Telecommunication System	***Path 1*** Installing optical ground wire	3	30
	Path 2, Section 1 Establishing construction yards Conducting road work Retrofitting existing towers Removing existing overhead ground wire Installing optical ground wire Restoring temporary construction areas and roads	49	200
	Path 2, Section 2 Trenching Pulling/installing underground fiber optic cable Installing underground duct	12	76
	Path 2, Section 3 – Proposed Project Installing microwave site Trenching Pulling/installing underground fiber optic cable Installing underground duct	16	20
	Path 2, Section 3 – Golf Course Alternative Trenching Pulling/installing underground fiber optic cable Installing underground duct Installing all-dielectric self-supporting cable	24	153
	Path 2 – Section 3 – Mountain Pass Alternative Trenching Pulling/installing underground fiber optic cable Installing underground duct	28	230

Table 2-23 Construction Workforce Required for the Proposed Project			
Project Component	**Summary of Construction Activities**	**Total Estimated Workforce**	**Estimated Schedule (days)**
	Installing all-dielectric self-supporting cable		

APPENDIX B

Southern California Edison
EITP A.09-05-027

DATA REQUEST SET EITP-CPUC-SCE-05

To: CPUC
Prepared by: Jeffrey Miller
Title: Project Manager
Dated: 05/06/2010

Received Date: 05/06/2010

Question 11:

Source and amount of water needed for each project phase—construction, operation & maintenance (a Water Usage Plan is required in MM W-2)

Response to Question 11:

A. Construction Water Usage

SCE estimates using a maximum of between 32,000 and 40,000 gallons per day (gpd) of water for the construction phase of the project. (See response to data gap Question No. 2.21.2.) This translates to an estimate of between 30.6 to 38.3 acre feet of water per annum. (See response to data gap Question No. 10.05).

Regarding the source of the water needed during the construction phase, SCE has previously indicated that water would be provided by a local vendor. (See response to data gap Question No. 2.19.) Upon further investigation, SCE has identified several local sources of water in the area as follows:

- Molycorp Minerals (Mountain Pass facility), San Bernardino County, California
- Las Vegas Valley Water District (LVVWD), Jean, Nevada
- City of Henderson, Nevada

After discussions with Molycorp Minerals regarding the water it can make available to meet the project construction needs from its Mountain Pass facility, SCE intends that Molycorp Minerals will be its primary source of water.

Molycorp's Mountain Pass operation derives water from three sources: (1) the Ivanpah fresh water production well field, (2) the Shadow Valley fresh water production well field, and (3) the water that is pumped from the mine (while not part of the source assessment mentioned below, water production from the mine is approximately 150 gpm). County of San Bernardino Drinking Water Source Assessment reports from 2001 on 5 wells in the Ivanpah well field and 4 wells in the Shadow Valley well field indicate that the Ivanpah well field can produce 675 gpm, and the Shadow Valley well field can produce 830 gpm.

Based on this data and SCE's consultation with Molycorp Minerals, the Mountain Pass facility can supply the water needed for the construction phase of the project from any one of, or some combination of, the three available water sources.

In addition, LVVWD has stated that it could supply approximately 15,000 gpd from its facilities in Jean, NV. Further, the City of Henderson, NV, has stated it would have no problems being able to supply SCE with approximately 40,000 gpd for construction water from its facilities. Note: Other potential sources of water for the project include Primm Properties (Primm, Nevada) and Boulder City, Nevada.

B. Operations and Maintenance Water Usage

No water will be used during routine operation and maintenance of the transmission line. Polymer insulators are being proposed on the structures for this Project and they do not require cleaning/washing (See response to data gap Question No. 10.05).

Southern California Edison
EITP A.09-05-027

DATA REQUEST SET EITP-CPUC-SCE-06

To: CPUC
Prepared by: Jeffrey Miller
Title: Project Manager
Dated: 06/08/2010

Received Date: 06/01/2010

Question A1:

SCE has identified the Molycorp Minerals Mountain Pass facility as a potential source of water for EITP construction needs. The BLM has determined that produced water from the Molycorp Mine is not an appropriate water source for use during EITP construction and operation; however, the use of water drawn from Molycorp Mine wells is acceptable. In order to assess the impacts of using water drawn from the local water sources on water and other resources, provide the following information:

A.1 Basics of Well Capacity used by Molycorp Mine. Please provide the location of the existing wells relative to the Molycorp mine site. Also provide specific hydraulic characteristics of the well fields including hydrologic connectivity, storativity (porosity), specific capacity and production ranges of the well or wells.

Response to Question A1:

Please find attached San Bernardino County Source Assessment documents. Note: It is SCE's understanding that this aquifer has been exhaustively studied and that the BLM is in possession of all of these studies as well as the quarterly groundwater monitoring reports for the Ivanpah area that continue to be produced by Chevron. Further, SCE believes that George Meckfessel of the BLM's Needles office is familiar with this information.

Drinking Water Source Assessment

Water System

Moly Corp Inc

San Bernardino County

Water Source

Well#9-Ivanpah

Assessment Date

April, 2001

California Department of Health Services
Drinking Water Field Operations Branch
LPA San Bernardino County

District No.	**66**
System No.	**3600172**
Source No.	**009**
PS Code	**15N/15E-20H04 S**

Assessment Summary

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#9-Ivanpah **Source No.** 009 **PS Code** 15N/15E-20H04 S

Completed by Scott Rose **Date** April, 2001

Description of System and Source

The Moly Corp Inc water system is located in San Bernardino County and serves the Mt. Pass community and there are approximately 10 service connections serving a population of 200.
The drinking water source for the Moly Corp Inc water system is from two well fields located in Shadow Valley and Ivanpah Valley. General land use is rural conservation undeveloped.

Assessment Procedures

The assessment of the source Well #9 at Ivanpah was conducted by County office, and Water System staff.
The following sources of information were used in the assessment: water system files, County records, previous study, etc].

Procedures used to conduct the assessment include: Field Survey and visual inspection.

Discussion of Vulnerability

This well field was most vulnerable to onsite storage of Government equipment, during investigation of waste discharges from the mining process water to an evaporation pond >1mile away.

Contents of this Assessment

Yes [X]	No [ ]	**Assessment Summary**
Yes [X]	No [ ]	**Vulnerability Summary**
Yes [X]	No [ ]	**Source Location Form**
Yes [X]	No [ ]	**Delineation of Ground Water Protection Zones**
Yes [X]	No [ ]	**Physical Barrier Effectiveness Checklist**
Yes [X]	No [ ]	**Well Data Sheet**
Yes [X]	No [ ]	**Inventory of Possible Contaminating Activities**
Yes [X]	No [ ]	**Vulnerability Ranking**
Yes [X]	No [ ]	**Assessment Map**

Comments

Access to the well #9 was secured by a locked fence

Drinking Water Source Assessment and Protection (DWSAP) Program

GPS Field Data Sheet

Data Dictionary File: DD20010305.TXT

District Name: San Bernardino County District No.: 66 County: San Bernardino

System Name: Moly Corp Inc System No.: 3600172

Source Name: Well#9-Ivanpah Source No.: 009 PS Code: 15N/15E-20

Your Name: Dwane Pianalto Date: 3/6/01

Rover File Name: RD306018A Time: 1115 am (pm)

Nearest Base Station (select one)

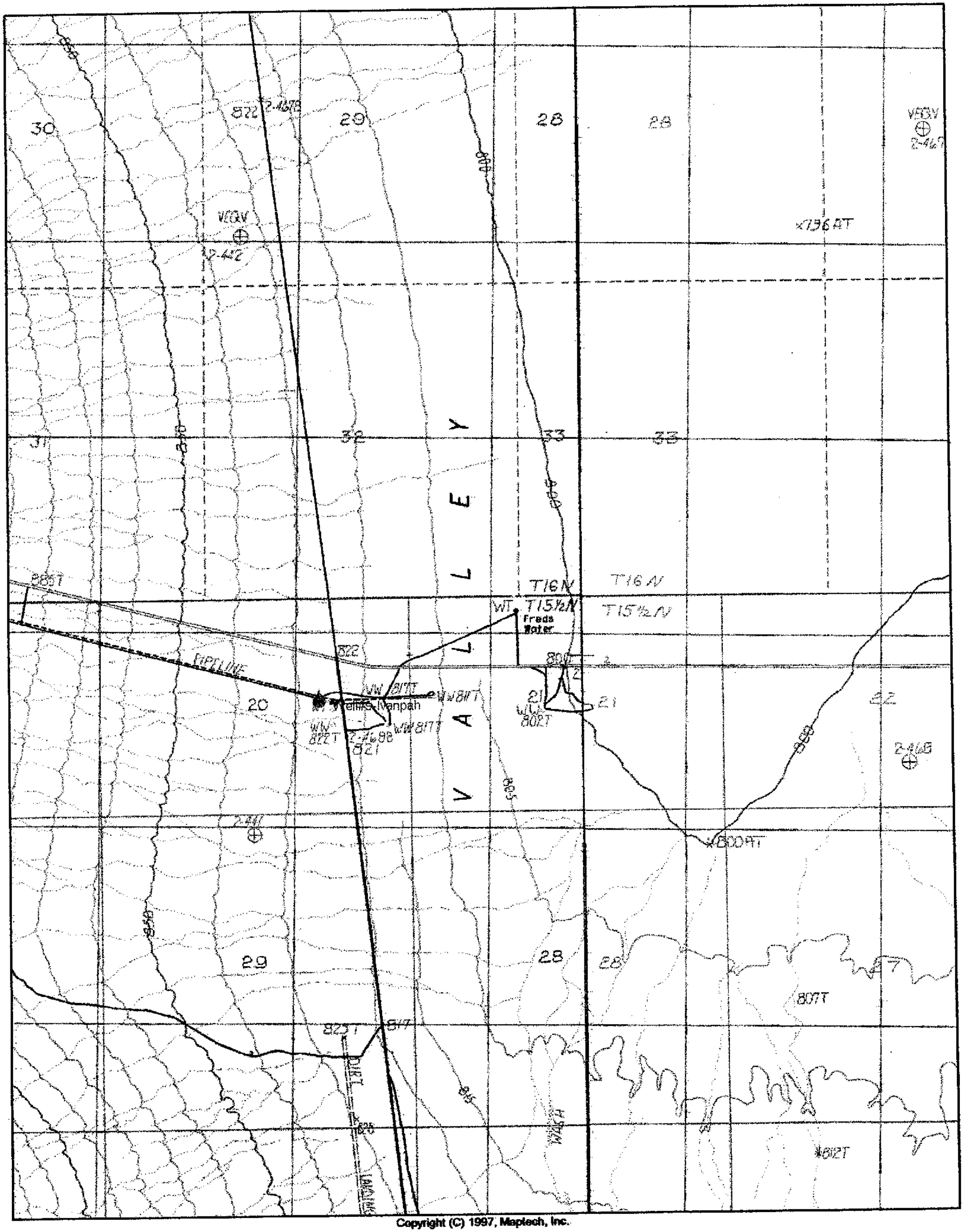
- ☐ Blythe [Blythe Base Station]
- ☒ Las Vegas [Las Vegas Valley Water District Base Station]
- ☐ Ridgecrest (China Lake) [China Lake USN Base Station]
- ☐ Torrance [Torrance Base Station]

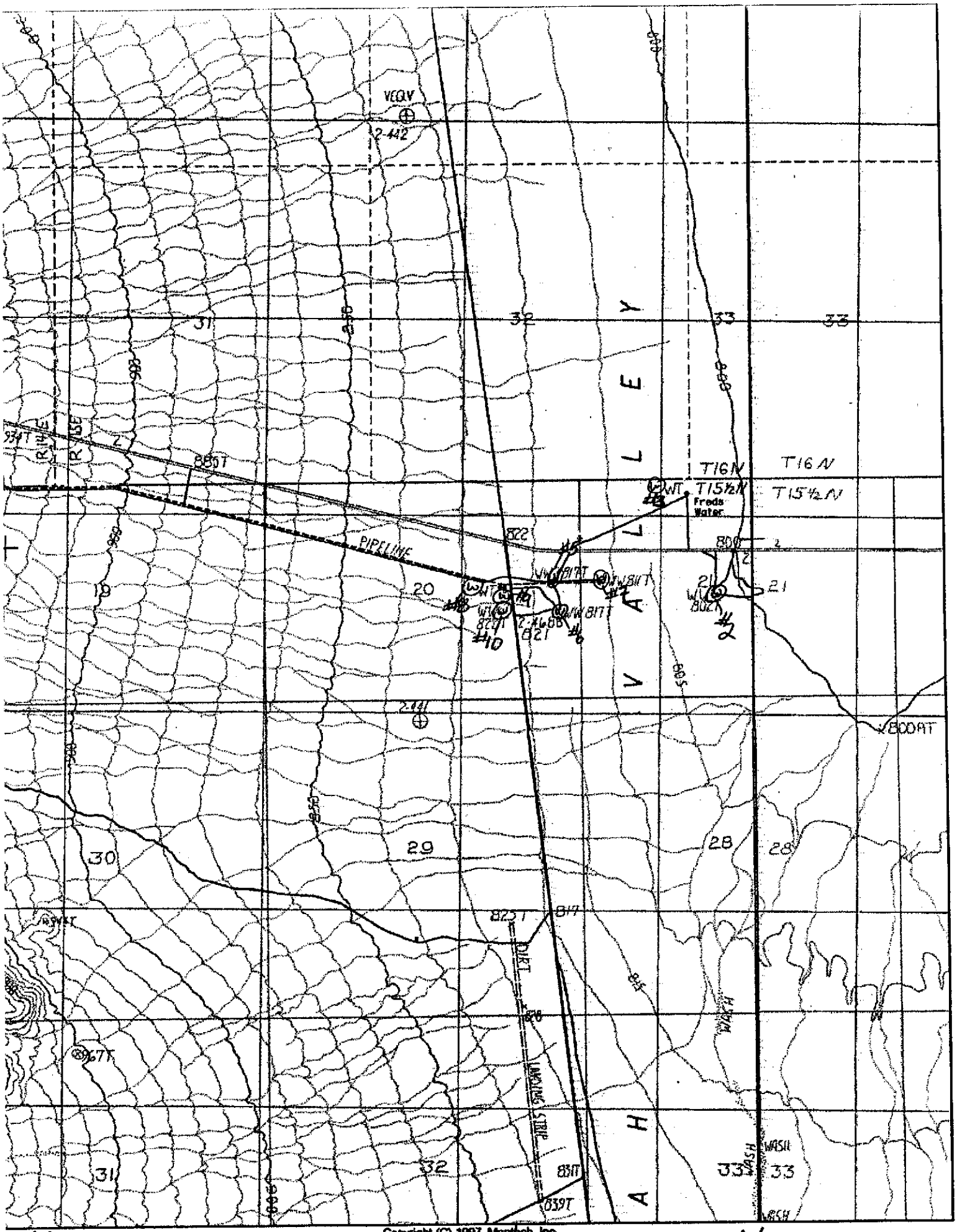
Offset Location? ☐ Offset Angle _____ degrees Offset Distance _____ meters

Site Sketch

Site Description _____

Comments _____





Moly Corp Ivanpah Valley Well Field

Well Data

System Name: Ivanpah Valley Well Field No: _____
Source of Information: Completion Report - April 20, 1982
Collected By: Geoff Nason Date: _____

Number or Name	Ivanpah Well #9	
State Well Number	15N/15E20H(04)?	
Location (Cross Streets, etc)	Nipton Rd. & Ivanpah Rd.	
Date Drilled	4/82	
Neighborhood	open desert	
Lot Size	n/a	
Distance To: Sewer	n/a	
Sewage Disposal		
Abandoned Well	3,900 ft	
Property Line	1,800 ft	
Housing: Type	n/a	
Condition		
Pit Depth (if any)		
Floor (material)		
Drainage		
Well Depth	800 ft	
Drillers Report on File (yes or no)	yes	
Casing: Depth(s)	800 ft	
Diameter(s)	10 inches	
Material	steel	
Height above Floor	n/a	
Distance to perforations	300 ft	
Surface Sealed (yes or no)	yes	
Gravel Pack (yes or no)	yes	
Annular Seal (depth)	50 ft	
Impervious Strata: Thickness	40 ft	
Depth to	330 ft	
Water Levels: Static	212 ft (8/12/87)	
Pumping	not known	
Pump: Make	Grundfos	
Type	submersible	
Production (gpm)	170 (average)	
Depth to Bowls	483 ft (approx)	
Lubrication	sealed motor	
Power	electric	
Auxiliary Power	n/a	
Control	level control/on demand	
Discharge Location	Mountain Pass Plant	
Discharge To	fresh water holding tanks	
Pump to Waste (yes or no)	no	
Frequency of Use	constant/daily	
Flood Hazard	n/a	
Remarks and Defects		

Revised: 4/1/93

Drinking Water Source Assessment and Protection (DWSAP) Program

Delineation of Ground Water Protection Zones

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#9-Ivanpah **Source No.** 009 **PS Code** 15N/15E-20H04 S

Completed by Scott Rose **Date** April, 2001

Method Used to Delineate Protection Zones

X 1. Calculated Fixed Radius

2. Modified Calculated Fixed Radius (Attach documentation for direction of ground water flow.)
3. More Detailed Methods
4. Arbitrary Fixed Radius (For use only by or permission of DHS)

Maximum Pumping Rate of Well (Q)	**170**	gallons/minute	
	274	acre feet/year	
	11,945,390	cubic feet/year	
Effective Porosity	**0.20**	%	[X] Default Value
Screened Interval of Well	**500**	feet	[ ] Default Value

Protection Zone	Calculated Value	Minimum Value	Radius of Protection Zone
Zone A - 2 Year TOT*	276 Feet	600 Feet	**600** Feet
Zone B5 - 5 Year TOT*	436 Feet	1,000 Feet	**1,000** Feet
Zone B10 - 10 Year TOT*	617 Feet	1,500 Feet	**1,500** Feet

Drinking Water Source Assessment and Protection (DWSAP) Program

Physical Barrier Effectiveness (PBE)

District Name: LPA San Bernardino County | District No.: 66 | County: San Bernardino

System Name: Moly Corp Inc | System No.: 3600172

Source Name: Well#9-Ivanpah | Source No.: 009 | PS Code: 15N/15E-20H04 S

Completed by: Scott Rose | Date: April, 2001

Parameter		Possible Points	This Source	Score
Type of Aquifer				
Confinement				
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer		0	X	0
2. Confined		50		
Aquifer Material (Unconfined Aquifers)				
Type of material within aquifer				
1. Porous Media (Interbedded sands, silts, clays, gravels) with continuous clay layer minimum 25' thick above water table within Zone A		20		
2. Porous Media (Interbedded sands, silts, clays, gravels)		10	X	10
3. Fractured rock (Low Physical Barrier Effectiveness - no further questions required)		0		
Pathways of Contamination (All Aquifers)				
Presence of Abandoned or Improperly Destroyed Wells				
1. Present within Zone A (2 year TOT distance)	Yes	0		
	No	5	X	5
	Unknown	0		
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0		
	No	3	X	3
	Unknown	0		
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0		
	No	2	X	2
	Unknown	0		
Static Water Conditions (Unconfined Aquifers)				
Depth to Static Water (DTW) 238 feet	0 to 20 feet	0		
	20 to 50 feet	2		
	50 to 100 feet	6		
	Greater than 100 feet	10	X	10
	Unknown	0		
Well Operation (Unconfined Aquifers)				
Depth to Uppermost Perforations (DUP) 300 feet				
Maximum Pumping Rate of Well (Q) 170 gallons/minute				
Length of Screened Interval (H) 500 feet				
	Less than 5	0		
[DUP - DTW / Q/H] 182.35	Between 5 and 10	5		
	Greater than 10	10	X	10
	Unknown	0		

Physical Barrier Effectiveness (PBE)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#9-Ivanpah **Source No.** 009 **PS Code** 15N/15E-20H04 S

Parameter		Possible Points	This Source	Score
Well Construction (All Aquifers)				
Sanitary Seal (Annular Seal) Depth 50 feet	None or less than 20 feet	0		
	Between 20 and 50 feet	6		
	50 feet or greater	10	X	10
	Unknown	0		
Surface Seal (concrete cap)	Not present or improperly constructed	0		
	Watertight, slopes away from well at least 2' laterally in all directions	4	X	4
	Unknown	0		
Flooding potential at well site	Subject to localized flooding (i.e. in low area or unsealed pit or vault) or within 100 year flood plain	0		
	Not subject to flooding	1	X	1
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	X	5
	Unknown	0		

Score	Effectiveness
0 to 35	Low
36 to 69	Moderate
70 to 100	High

Maximum Score = 70

Score 60

Effectiveness Moderate

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#9-Ivanpah **Source No.** 009 **PS Code** 15N/15E-20H04 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Commercial/Industrial					
Automobile- Body shops (H)	N	N	N		
Automobile- Car washes (M)	N	N	N		
Automobile- Gas stations (VH)	N	N	N		
Automobile- Repair shops (H)	N	N	N		
Boat services/repair/ refinishing (H)	N	N	N		
Chemical/petroleum pipelines (H)	N	N	N		
Chemical/petroleum processing/storage (VH)	N	N	N		
Dry cleaners (VH)	N	N	N		
Electrical/electronic manufacturing (H)	N	N	N		
Fleet/truck/bus terminals (H)	N	N	N		
Furniture repair/ manufacturing (H)	N	N	N		
Home manufacturing (H)	N	N	N		
Junk/scrap/salvage yards (H)	N	N	N		
Machine shops (H)	N	N	N		
Metal plating/ finishing/fabricating (VH)	N	N	N		
Photo processing/printing (H)	N	N	N		
Plastics/synthetics producers (VH)	N	N	N		
Research laboratories (H)	N	N	N		
Wood preserving/treating (H)	N	N	N		
Wood/pulp/paper processing and mills (H)	N	N	N		
Lumber processing and manufacturing (H)	N	N	N		
Sewer collection systems (H, if in Zone A, otherwise L)	N	N	N		
Parking lots/malls (>50 spaces) (M)	N	N	N		
Cement/concrete plants (M)	N	N	N		
Food processing (M)	N	N	N		
Funeral services/graveyards (M)	N	N	N		
Hardware/lumber/parts stores (M)	N	N	N		
Appliance/Electronic Repair (L)	N	N	N		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Inventory of Possible Contaminating Activities (PCA Inventory)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#9-Ivanpah **Source No.** 009 **PS Code** 15N/15E-20H04 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Commercial/Industrial					
Office buildings/complexes (L)	N	N	N		
Rental Yards (L)	N	N	N		
RV/mini storage (L)	N	N	N		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#9-Ivanpah **Source No.** 009 **PS Code** 15N/15E-20H04 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Agricultural/Rural					
Grazing (> 5 large animals or equivalent per acre) (H in Zone A, otherwise M)	N	N	N		
Concentrated Animal Feeding Operations (CAFOs) as defined in federal regulation1 (VH in Zone A, otherwise H)	N	N	N		
Animal Feeding Operations as defined in federal regulation2 (VH in Zone A, otherwise H)	N	N	N		
Other Animal operations (H in Zone A, otherwise M)	N	N	N		
Farm chemical distributor/ application service (H)	N	N	N		
Farm machinery repair (H)	N	N	N		
Septic systems - low density (<1/acre) (H in Zone A, otherwise L)	N	N	N		
Lagoons / liquid wastes (H)	N	N	N		
Machine shops (H)	N	N	N		
Pesticide/fertilizer/ petroleum storage & transfer areas (H)	N	N	N		
Agricultural Drainage (H in Zone A, otherwise M)	N	N	N		
Wells - Agricultural/ Irrigation (H)	N	N	N		
Managed Forests (M)	N	N	N		
Crops, irrigated (Berries, hops, mint, orchards, sod, greenhouses, vineyards, nurseries, vegetable) (M)	N	N	N		
Fertilizer, Pesticide/ Herbicide Application (M)	N	N	N		
Sewage sludge/biosolids application (M)	N	N	N		
Crops, nonirrigated (e.g., Christmas trees, grains, grass seeds, hay, pasture) (L) (includes drip-irrigated crops)	N	N	N		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#9-Ivanpah **Source No.** 009 **PS Code** 15N/15E-20H04 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
NPDES/WDR permitted discharges (H)	N	N	N		
Underground Injection of Commercial/Industrial Discharges (VH)	N	N	N		
Historic gas stations (VH)	N	N	N		
Historic waste dumps/ landfills (VH)	N	N	N		
Illegal activities/ unauthorized dumping (H)	N	N	N		
Injection wells/ dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	N	N	N		
Military installations (VH)	N	N	N		
Mining operations - Historic (VH)	N	N	N		
Mining operations - Active (VH)	N	N	N		
Mining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	N	N	N		
Salt Water Intrusion (H)	N	N	N		
Recreational area - surface water source (H)	N	N	N		
Underground storage tanks - Confirmed leaking tanks (VH)	N	N	N		
Underground storage tanks - Decommissioned - inactive tanks (L)	N	N	N		
Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)	N	N	N		
Underground storage tanks - Not yet upgraded or registered tanks (H)	N	N	N		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	N	N	N		
Above ground storage tanks (M)	N	Y	Y		
Wells - Water supply (M)	Y	Y	Y		
Construction/demolition staging areas (M)	Y	N	N		
Contractor or government agency equipment storage yards (M)	Y	Y	N		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Inventory of Possible Contaminating Activities (PCA Inventory)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#9-Ivanpah **Source No.** 009 **PS Code** 15N/15E-20H04 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
Dredging (M)	N	N	N		
Transportation corridors - Freeways/state highways (M)	N	N	N		
Transportation corridors - Railroads (M)	N	N	N		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways (herbicide use areas) (M)	N	N	N		
Transportation corridors - Roads/ Streets (L)	Y	Y	Y		
Hospitals (M)	N	N	N		
Storm Drain Discharge Points (M)	N	N	N		
Storm Water Detention Facilities (M)	N	N	N		
Artificial Recharge Projects - Injection wells (potable water) (L)	N	N	N		
Artificial Recharge Projects - Injection wells (non-potable water) (M)	N	N	N		
Artificial Recharge Projects - Spreading Basins (potable water) (L)	N	N	N		
Artificial Recharge Projects - Spreading Basins (non-potable water) (M)	N	N	N		
Medical/dental offices/clinics (L)	N	N	N		
Veterinary offices/clinics (L)	N	N	N		
Surface water - streams/ lakes/rivers (L)	N	N	N		
Wells - monitoring, test holes (L)	N	N	N		

Y = Yes N = No U = Unknown

* = A contaminant potentially associated with this activity has been detected in the water supply.

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Ranking

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#9-Ivanpah **Source No.** 009 **PS Code** 15N/15E-20H04 S

Completed by Scott Rose **Date** April, 2001

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Construction/demolition staging areas (M)		3	5	3	11
A	Contractor or government agency equipment storage yards (M)		3	5	3	11
A	Wells - Water supply (M)		3	5	3	11
A	Transportation corridors - Roads/ Streets (L)		1	5	3	9
B5	Above ground storage tanks (M)		3	3	3	9
B5	Contractor or government agency equipment storage yards (M)		3	3	3	9
B5	Wells - Water supply (M)		3	3	3	9

*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Summary

District Name LPA San Bernardino County District No. 66 County San Bernardino

System Name Moly Corp Inc System No. 3600172

Source Name Well#9-Ivanpah Source No. 009 PS Code 15N/15E-20H04 S

Completed by Scott Rose Date April, 2001

THE FOLLOWING INFORMATION MUST BE INCLUDED IN THE SYSTEM CONSUMER CONFIDENCE REPORT

A source water assessment was conducted for the **Well#9-Ivanpah** of the **Moly Corp Inc** water system in **April, 2001**.

The source is considered most vulnerable to the following activities not associated with any detected contaminants:

Construction/demolition staging areas
Contractor or government agency equipment storage yards
Wells - Water supply

A copy of the complete assessment may be viewed at:

San Bernardino County Government Center
385 North Arrowhead
San Bernardino, CA 92415-0160

You may request a summary of the assessment be sent to you by contacting:

Scott Rose
REHS
(909) 387-4666

Drinking Water Source Assessment

Water System

Moly Corp Inc

San Bernardino County

Water Source

Well#5- Ivanpah

Assessment Date

April, 2001

California Department of Health Services
Drinking Water Field Operations Branch
LPA San Bernardino County

District No.	**66**
System No.	**3600172**
Source No.	**005**
PS Code	**15N/15E-20H02 S**

Assessment Summary

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#5- Ivanpah **Source No.** 005 **PS Code** 15N/15E-20H02 S

Completed by Scott Rose **Date** April, 2001

Description of System and Source

The Moly Corp Inc water system is located in San Bernardino County and serves the Mt Pass community and several buildings related to mining and milling. There are approximately 10 service connections serving a population of200.

The drinking water source for the Moly Corp Inc water system is from two well fields,; Shadow Valley and Ivanpah Valley. General land use is natural /undeveloped .

Assessment Procedures

A Field survey was done to assess any hazards

Discussion of Vulnerability

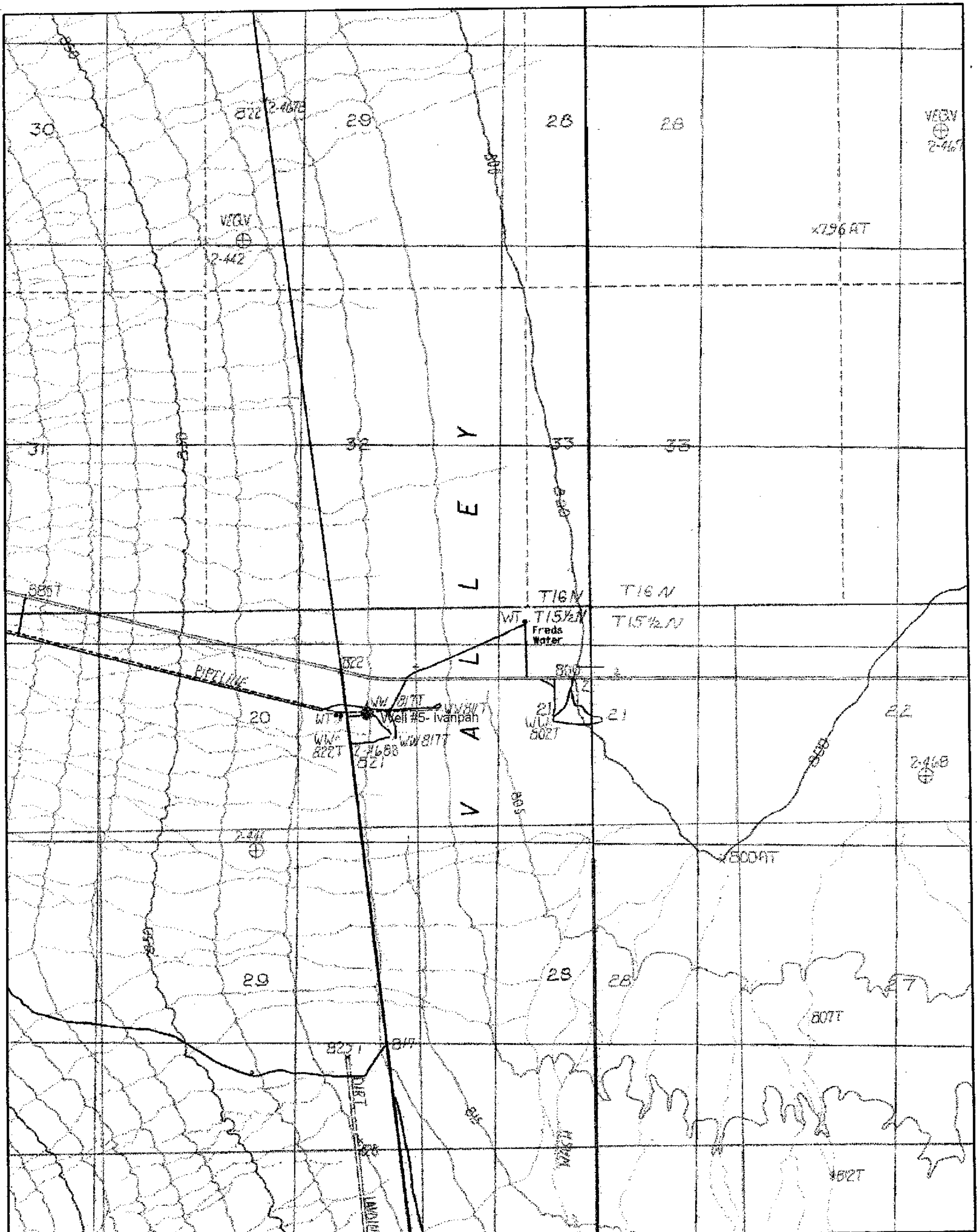
This well field was most vulnerable to onsite storage of Government equipment, during investigation of waste discharges from the mining process water to an evaporation pond >1mile away.

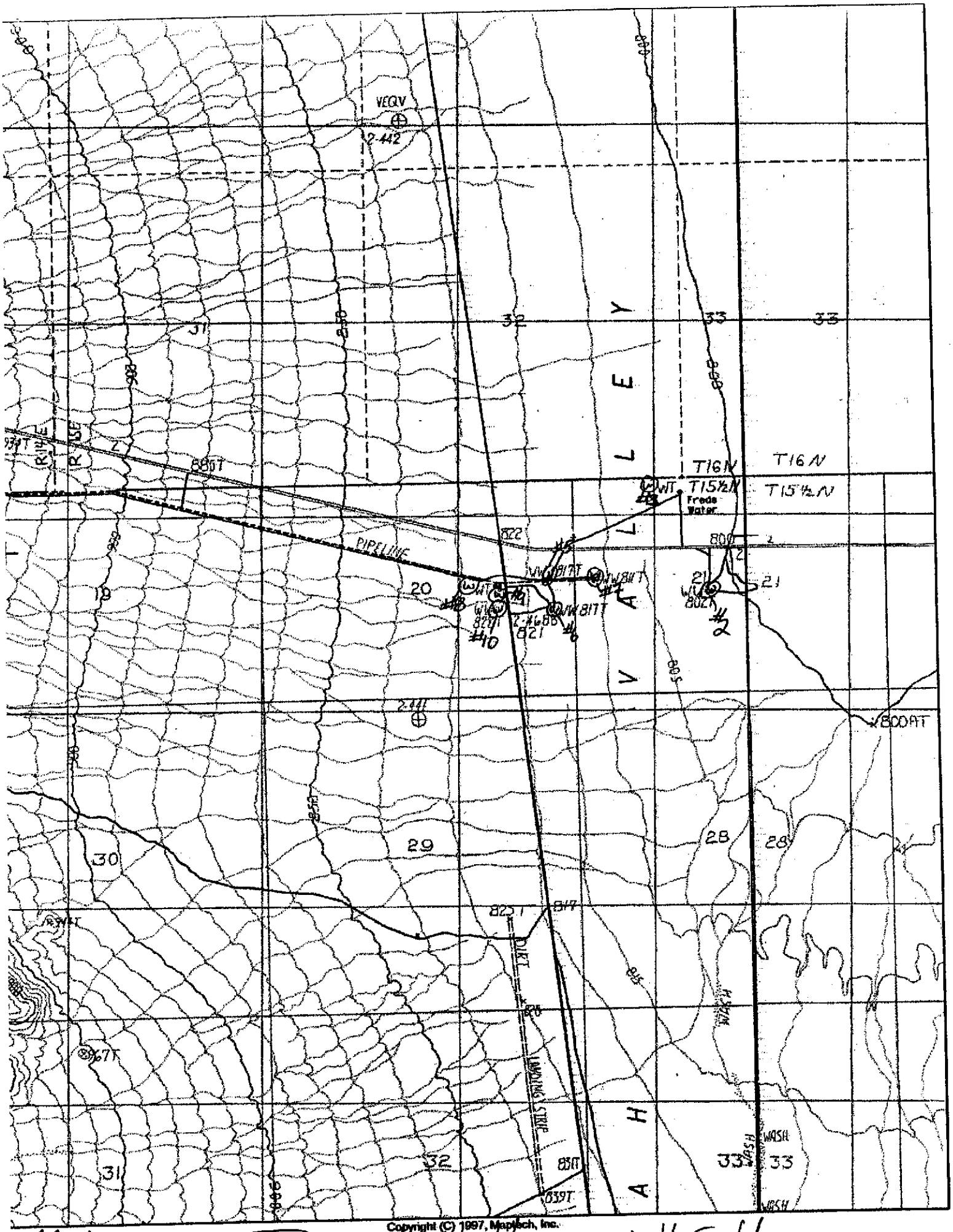
Contents of this Assessment

Yes [X]	No [ ]	**Assessment Summary**
Yes [X]	No [ ]	**Vulnerability Summary**
Yes [X]	No [ ]	**Source Location Form**
Yes [X]	No [ ]	**Delineation of Ground Water Protection Zones**
Yes [X]	No [ ]	**Physical Barrier Effectiveness Checklist**
Yes [X]	No [ ]	**Well Data Sheet**
Yes [X]	No [ ]	**Inventory of Possible Contaminating Activities**
Yes [X]	No [ ]	**Vulnerability Ranking**
Yes [X]	No [ ]	**Assessment Map**

Comments

Access to the well #5 was secured by a locked fence





MolyCorp Ivanpah Valley Well Field

Drinking Water Source Assessment and Protection (DWSAP) Program

GPS Field Data Sheet

Data Dictionary File DD20010305.TXT

District Name San Bernardino County District No. 66 County San Bernardino

System Name Moly Corp Inc System No. 3600172

Source Name Well#5- Ivanpah Source No. 005 PS Code 15N/15E-20

Your Name Dwane Pianalto Date 3/6/01

Rover File Name R030618A Time _____ am pm

Nearest Base Station (select one)

- ☐ Blythe [Blythe Base Station]
- ☒ Las Vegas [Las Vegas Valley Water District Base Station]
- ☐ Ridgecrest (China Lake) [China Lake USN Base Station]
- ☐ Torrance [Torrance Base Station]

Site Sketch

Offset Location? ☐

Offset Angle _____ degrees

Offset Distance _____ meters

Site Description _____

Comments _____

Well Data

System Name: Ivanpah Valley Fresh Water Field No: _____
Source of Information: Evaluation of Ivanpah Water Well Field
Collected By: T. Garcia Date: _____

Number or Name	Ivanpah Well #5	Active
State Well Number	15N/15E 20 H(2)?	
Location (Cross Streets,etc)	Nipton Rd. & Ivanpah Rd.	
Date Drilled	11/23/74	
Neighborhood	open desert	
Lot Size	n/a	
Distance To: Sewer	n/a	
Sewage Disposal		
Abandoned Well	2,700 ft	
Property Line	1,000 ft	
Housing: Type	n/a	
Condition		
Pit Depth (if any)		
Floor (material)		
Drainage		
Well Depth	800 ft	
Drillers Report on File (yes or no)	no	
Casing: Depth(s)	700 ft	
Diameter(s)	18 inches	
Material	steel	
Height above Floor	n/a	
Distance to perforations	152 ft	
Surface Sealed (yes or no)	yes	
Gravel Pack (yes or no)	yes	
Annular Seal (depth)	not known	
Impervious Strata: Thickness	400 ft	
Depth to	340 ft	
Water Levels: Static	not known	
Pumping	not known	
Pump: Make	Grundfos	
Type	submersible	
Production (gpm)	100 (average)	
Depth to Bowls	430 ft (approx)	
Lubrication	sealed motor	
Power	electrical	
Auxiliary Power	n/a	
Control	level control/on demand	
Discharge Location	Mountain Pass Plant	
Discharge To	fresh water holding tanks	
Pump to Waste (yes or no)	no	
Frequency of Use		
Flood Hazard		
Remarks and Defects		

Revised: 4/1/93

Drinking Water Source Assessment and Protection (DWSAP) Program

Delineation of Ground Water Protection Zones

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#5- Ivanpah **Source No.** 005 **PS Code** 15N/15E-20H02 S

Completed by Scott Rose **Date** April, 2001

Method Used to Delineate Protection Zones

X 1. Calculated Fixed Radius

2. Modified Calculated Fixed Radius (Attach documentation for direction of ground water flow.)
3. More Detailed Methods
4. Arbitrary Fixed Radius (For use only by or permission of DHS)

Maximum Pumping Rate of Well (Q)	**100**	gallons/minute	
	161	acre feet/year	
	7,026,700	cubic feet/year	
Effective Porosity	**0.20**	%	[X] Default Value
Screened Interval of Well	**300**	feet	[ ] Default Value

Protection Zone	Calculated Value	Minimum Value	Radius of Protection Zone
Zone A - 2 Year TOT*	273 Feet	600 Feet	**600** Feet
Zone B5 - 5 Year TOT*	432 Feet	1,000 Feet	**1,000** Feet
Zone B10 - 10 Year TOT*	611 Feet	1,500 Feet	**1,500** Feet

Drinking Water Source Assessment and Protection (DWSAP) Program

Physical Barrier Effectiveness (PBE)

District Name: LPA San Bernardino County | District No.: 66 | County: San Bernardino

System Name: Moly Corp Inc | System No.: 3600172

Source Name: Well#5- Ivanpah | Source No.: 005 | PS Code: 15N/15E-20H02 S

Completed by: Scott Rose | Date: April, 2001

Parameter		Possible Points	This Source	Score
Type of Aquifer				
Confinement				
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer		0	X	0
2. Confined		50		
Aquifer Material (Unconfined Aquifers)				
Type of material within aquifer				
1. Porous Media (Interbedded sands, silts, clays, gravels) with continuous clay layer minimum 25' thick above water table within Zone A		20		
2. Porous Media (Interbedded sands, silts, clays, gravels)		10	X	10
3. Fractured rock (Low Physical Barrier Effectiveness - no further questions required)		0		
Pathways of Contamination (All Aquifers)				
Presence of Abandoned or Improperly Destroyed Wells				
1. Present within Zone A (2 year TOT distance)	Yes	0		
	No	5	X	5
	Unknown	0		
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0		
	No	3	X	3
	Unknown	0		
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0		
	No	2	X	2
	Unknown	0		
Static Water Conditions (Unconfined Aquifers)				
Depth to Static Water (DTW) 187 feet	0 to 20 feet	0		
	20 to 50 feet	2		
	50 to 100 feet	6		
	Greater than 100 feet	10	X	10
	Unknown	0		
Well Operation (Unconfined Aquifers)				
Depth to Uppermost Perforations (DUP) 152 feet				
Maximum Pumping Rate of Well (Q) 100 gallons/minute				
Length of Screened Interval (H) 300 feet	Less than 5	0	X	0
[DUP - DTW / Q/H] -105.00	Between 5 and 10	5		
	Greater than 10	10		
	Unknown	0		

Physical Barrier Effectiveness (PBE)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#5- Ivanpah **Source No.** 005 **PS Code** 15N/15E-20H02 S

Parameter		Possible Points	This Source	Score
Well Construction (All Aquifers)				
Sanitary Seal (Annular Seal) Depth 0 feet	None or less than 20 feet	0		
	Between 20 and 50 feet	6		
	50 feet or greater	10		
	Unknown	0	X	0
Surface Seal (concrete cap)	Not present or improperly constructed	0		
	Watertight, slopes away from well at least 2' laterally in all directions	4	X	4
	Unknown	0		
Flooding potential at well site	Subject to localized flooding (i.e. in low area or unsealed pit or vault) or within 100 year flood plain	0		
	Not subject to flooding	1	X	1
	Unknown	0		
Security at well site	Not secure	0	X	0
	Secure	5		
	Unknown	0		

Score	Effectiveness
0 to 35	Low
36 to 69	Moderate
70 to 100	High

Maximum Score = 70

Score 35

Effectiveness Low

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#5- Ivanpah **Source No.** 005 **PS Code** 15N/15E-20H02 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Agricultural/Rural					
Grazing (> 5 large animals or equivalent per acre) (H in Zone A, otherwise M)	N	N	N		
Concentrated Animal Feeding Operations (CAFOs) as defined in federal regulation1 (VH in Zone A, otherwise H)	N	N	N		
Animal Feeding Operations as defined in federal regulation2 (VH in Zone A, otherwise H)	N	N	N		
Other Animal operations (H in Zone A, otherwise M)	N	N	N		
Farm chemical distributor/ application service (H)	N	N	N		
Farm machinery repair (H)	N	N	N		
Septic systems - low density (<1/acre) (H in Zone A, otherwise L)	N	N	N		
Lagoons / liquid wastes (H)	N	N	N		
Machine shops (H)	N	N	N		
Pesticide/fertilizer/ petroleum storage & transfer areas (H)	N	N	N		
Agricultural Drainage (H in Zone A, otherwise M)	N	N	N		
Wells - Agricultural/ Irrigation (H)	N	N	N		
Managed Forests (M)	N	N	N		
Crops, irrigated (Berries, hops, mint, orchards, sod, greenhouses, vineyards, nurseries, vegetable) (M)	N	N	N		
Fertilizer, Pesticide/ Herbicide Application (M)	N	N	N		
Sewage sludge/biosolids application (M)	N	N	N		
Crops, nonirrigated (e.g., Christmas trees, grains, grass seeds, hay, pasture) (L) (includes drip-irrigated crops)	N	N	N		

Y = Yes N = No U = Unknown

* = A contaminant potentially associated with this activity has been detected in the water supply.

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#5- Ivanpah **Source No.** 005 **PS Code** 15N/15E-20H02 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
NPDES/WDR permitted discharges (H)	N	N	N		
Underground Injection of Commercial/Industrial Discharges (VH)	N	N	N		
Historic gas stations (VH)	N	N	N		
Historic waste dumps/ landfills (VH)	N	N	N		
Illegal activities/ unauthorized dumping (H)	N	N	N		
Injection wells/ dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	N	N	N		
Military installations (VH)	N	N	N		
Mining operations - Historic (VH)	N	N	N		
Mining operations - Active (VH)	N	N	N		
Mining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	N	N	N		
Salt Water Intrusion (H)	N	N	N		
Recreational area - surface water source (H)	N	N	N		
Underground storage tanks - Confirmed leaking tanks (VH)	N	N	N		
Underground storage tanks - Decommissioned - inactive tanks (L)	N	N	N		
Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)	N	N	N		
Underground storage tanks - Not yet upgraded or registered tanks (H)	N	N	N		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	N	N	N		
Above ground storage tanks (M)	N	N	Y		
Wells - Water supply (M)	Y	Y	Y		
Construction/demolition staging areas (M)	N	N	Y		
Contractor or government agency equipment storage yards (M)	N	N	Y		

Y = Yes N = No U = Unknown

* = A contaminant potentially associated with this activity has been detected in the water supply.

Inventory of Possible Contaminating Activities (PCA Inventory)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#5- Ivanpah **Source No.** 005 **PS Code** 15N/15E-20H02 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
Dredging (M)	N	N	N		
Transportation corridors - Freeways/state highways (M)	N	N	N		
Transportation corridors - Railroads (M)	N	N	N		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways (herbicide use areas) (M)	N	N	N		
Transportation corridors - Roads/ Streets (L)	Y	Y	Y		
Hospitals (M)	N	N	N		
Storm Drain Discharge Points (M)	N	N	N		
Storm Water Detention Facilities (M)	N	N	N		
Artificial Recharge Projects - Injection wells (potable water) (L)	N	N	N		
Artificial Recharge Projects - Injection wells (non-potable water) (M)	N	N	N		
Artificial Recharge Projects - Spreading Basins (potable water) (L)	N	N	N		
Artificial Recharge Projects - Spreading Basins (non-potable water) (M)	N	N	Y		
Medical/dental offices/clinics (L)	N	N	N		
Veterinary offices/clinics (L)	N	N	N		
Surface water - streams/ lakes/rivers (L)	N	N	N		
Wells - monitoring, test holes (L)	N	N	Y		

Y = Yes N = No U = Unknown

* = A contaminant potentially associated with this activity has been detected in the water supply.

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Ranking

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#5- Ivanpah **Source No.** 005 **PS Code** 15N/15E-20H02 S

Completed by Scott Rose **Date** April, 2001

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Wells - Water supply (M)		3	5	5	13
A	Transportation corridors - Roads/ Streets (L)		1	5	5	11
B5	Wells - Water supply (M)		3	3	5	11
B5	Transportation corridors - Roads/ Streets (L)		1	3	5	9
B10	Above ground storage tanks (M)		3	1	5	9
B10	Artificial Recharge Projects - Spreading Basins (non-potable water) (M)		3	1	5	9
B10	Construction/demolition staging areas (M)		3	1	5	9
B10	Contractor or government agency equipment storage yards (M)		3	1	5	9
B10	Wells - Water supply (M)		3	1	5	9

*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Summary

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#5- Ivanpah **Source No.** 005 **PS Code** 15N/15E-20H02 S

Completed by Scott Rose **Date** April, 2001

THE FOLLOWING INFORMATION MUST BE INCLUDED IN THE SYSTEM CONSUMER CONFIDENCE REPORT

A source water assessment was conducted for the **Well#5- Ivanpah**

of the **Moly Corp Inc** water system in **April, 2001**.

The source is considered most vulnerable to the following activities not associated with any detected contaminants:

Wells - Water supply

A copy of the complete assessment may be viewed at:

San Bernardino County Government Center
385 North Arrowhead Ave.
San Bernardino, CA 92415-0160

You may request a summary of the assessment be sent to you by contacting:

Scott Rose
REHS
(909) 387-4657

Drinking Water Source Assessment

Water System

Moly Corp Inc

San Bernardino County

Water Source

Well#6- Ivanpah

Assessment Date

April, 2001

California Department of Health Services
Drinking Water Field Operations Branch
LPA San Bernardino County

District No.	**66**
System No.	**3600172**
Source No.	**006**
PS Code	**15N/15E-20H03 S**

Assessment Summary

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#6- Ivanpah **Source No.** 006 **PS Code** 15N/15E-20H03 S

Completed by Scott Rose **Date** April, 2001

Description of System and Source

The Moly Corp Inc water system is located in San Bernardino County and serves the Mt Pass community and several buildings related to mining and milling. There are approximately 10 service connections serving a population of200.

The drinking water source for the Moly Corp Inc water system is from two well fields,; Shadow Valley and Ivanpah Valley. General land use is natural /undeveloped .

Assessment Procedures

A Field survey was done to assess any hazards

Discussion of Vulnerability

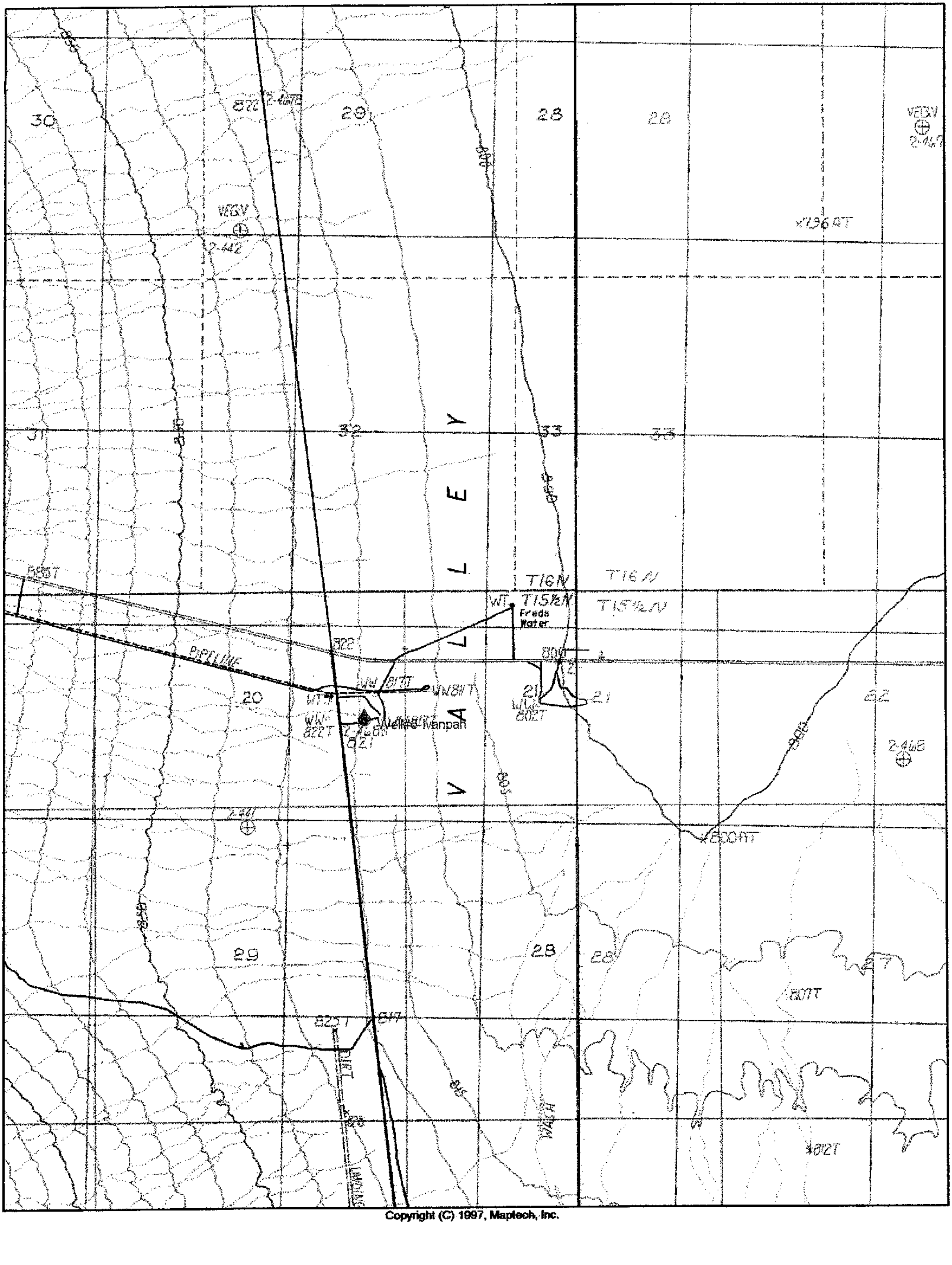
This well field was most vulnerable to onsite storage of Government equipment, during investigation of waste discharges from the mining process water to an evaporation pond >1mile away.

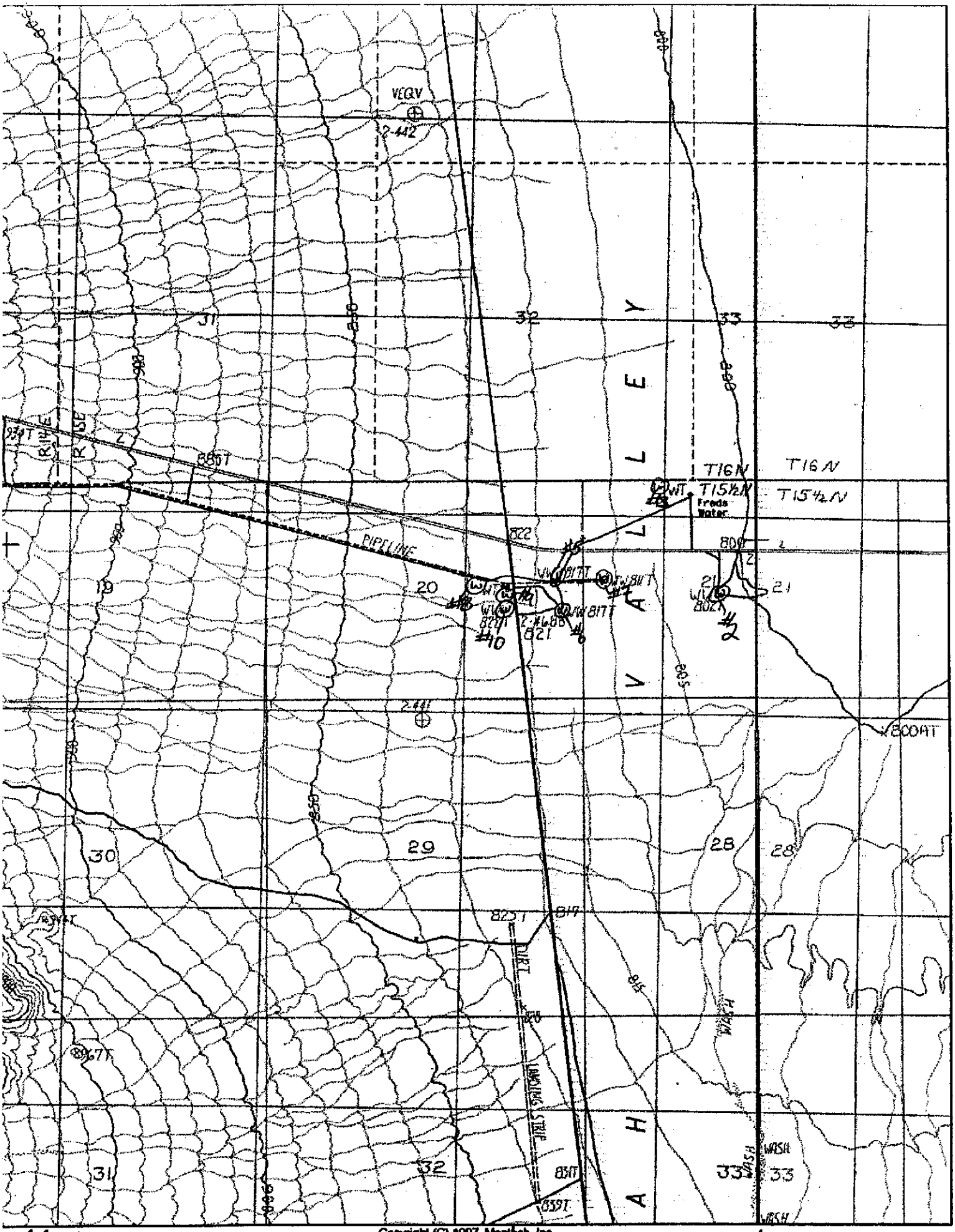
Contents of this Assessment

Yes [X]	No [ ]	**Assessment Summary**
Yes [X]	No [ ]	**Vulnerability Summary**
Yes [X]	No [ ]	**Source Location Form**
Yes [X]	No [ ]	**Delineation of Ground Water Protection Zones**
Yes [X]	No [ ]	**Physical Barrier Effectiveness Checklist**
Yes [X]	No [ ]	**Well Data Sheet**
Yes [X]	No [ ]	**Inventory of Possible Contaminating Activities**
Yes [X]	No [ ]	**Vulnerability Ranking**
Yes [X]	No [ ]	**Assessment Map**

Comments

Access to the well #6 was secured by a locked fence





Moly Corp Ivanpah Valley Well Field

Drinking Water Source Assessment and Protection (DWSAP) Program

GPS Field Data Sheet

Data Dictionary File DD20010305.TXT

District Name San Bernardino County District No. 66 County San Bernardino

System Name Moly Corp Inc System No. 3600172

Source Name Well#6- Ivanpah Source No. 006 PS Code 15N/15E-20

Your Name Dwane Pianalto Date 3/6/01

Rover File Name R030618A Time _____ am pm

Nearest Base Station (select one)

- ☐ Blythe [Blythe Base Station]
- ☒ Las Vegas [Las Vegas Valley Water District Base Station]
- ☐ Ridgecrest (China Lake) [China Lake USN Base Station]
- ☐ Torrance [Torrance Base Station]

Site Sketch

Offset Location? ☐ Offset Angle _____ degrees

Offset Distance _____ meters

Site Description _____

Comments _____

Well Data

System Name: Ivanpah Valley Well Field No:
Source of Information: Evaluation of Water Well Field 8/14/79
Collected By: Date:

Number or Name	Ivanpah Well #6	
State Well Number	15N/15E 20 H(2)?	
Location (Cross Streets,etc)	Nipton Rd. & Ivanpah Rd.	
Date Drilled	8/27/?4	
Neighborhood	open desert	
Lot Size	n/a	
Distance To: Sewer	n/a	
Sewage Disposal		
Abandoned Well	2,600 ft	
Property Line	1,500 ft	
Housing: Type	n/a	
Condition		
Pit Depth (if any)		
Floor (material)		
Drainage		
Well Depth	805 ft	
Drillers Report on File (yes or no)	no	
Casing: Depth(s)	805 ft	
Diameter(s)	12 inches	
Material	steel	
Height above Floor	n/a	
Distance to perforations	234	
Surface Sealed (yes or no)	yes	
Gravel Pack (yes or no)	yes	
Annular Seal (depth)	not known	
Impervious Strata: Thickness	not known	
Depth to	not known	
Water Levels: Static	162 ft	
Pumping	not known	
Pump: Make	Grundtos	
Type	submersible	
Production (gpm)	120 (average)	
Depth to Bowls	430 ft (approx)	
Lubrication	sealed motor	
Power	electrical	
Auxiliary Power	n/a	
Control	level control/on demand	
Discharge Location	Mountain Pass Plant	
Discharge To	fresh waster holding tanks	
Pump to Waste (yes or no)	no	
Frequency of Use	constant/daily	
Flood Hazard	no	
Remarks and Defects		

Revised: 4/1/93

Drinking Water Source Assessment and Protection (DWSAP) Program

Delineation of Ground Water Protection Zones

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#6- Ivanpah **Source No.** 006 **PS Code** 15N/15E-20H03 S

Completed by Scott Rose **Date** April, 2001

Method Used to Delineate Protection Zones

X 1. Calculated Fixed Radius

2. Modified Calculated Fixed Radius (Attach documentation for direction of ground water flow.)
3. More Detailed Methods
4. Arbitrary Fixed Radius (For use only by or permission of DHS)

Maximum Pumping Rate of Well (Q)	100	gallons/minute	
	161	acre feet/year	
	7,026,700	cubic feet/year	
Effective Porosity	0.20	%	[X] Default Value
Screened Interval of Well	310	feet	[ ] Default Value

Protection Zone	Calculated Value	Minimum Value	Radius of Protection Zone
Zone A - 2 Year TOT*	269 Feet	600 Feet	**600** Feet
Zone B5 - 5 Year TOT*	425 Feet	1,000 Feet	**1,000** Feet
Zone B10 - 10 Year TOT*	601 Feet	1,500 Feet	**1,500** Feet

Drinking Water Source Assessment and Protection (DWSAP) Program

Physical Barrier Effectiveness (PBE)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#6- Ivanpah **Source No.** 006 **PS Code** 15N/15E-20H03 S

Completed by Scott Rose **Date** April, 2001

Parameter		Possible Points	This Source	Score
Type of Aquifer				
Confinement				
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer		0	X	0
2. Confined		50		
Aquifer Material (Unconfined Aquifers)				
Type of material within aquifer				
1. Porous Media (Interbedded sands, silts, clays, gravels) with continuous clay layer minimum 25' thick above water table within Zone A		20		
2. Porous Media (Interbedded sands, silts, clays, gravels)		10	X	10
3. Fractured rock (Low Physical Barrier Effectiveness - no further questions required)		0		
Pathways of Contamination (All Aquifers)				
Presence of Abandoned or Improperly Destroyed Wells				
1. Present within Zone A (2 year TOT distance)	Yes	0		
	No	5	X	5
	Unknown	0		
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0		
	No	3	X	3
	Unknown	0		
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0		
	No	2	X	2
	Unknown	0		
Static Water Conditions (Unconfined Aquifers)				
Depth to Static Water (DTW) 184 feet	0 to 20 feet	0		
	20 to 50 feet	2		
	50 to 100 feet	6		
	Greater than 100 feet	10	X	10
	Unknown	0		
Well Operation (Unconfined Aquifers)				
Depth to Uppermost Perforations (DUP) 234 feet				
Maximum Pumping Rate of Well (Q) 100 gallons/minute				
Length of Screened Interval (H) 310 feet				
	Less than 5	0		
[DUP - DTW / Q/H] 155.00	Between 5 and 10	5		
	Greater than 10	10	X	10
	Unknown	0		

Physical Barrier Effectiveness (PBE)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#6- Ivanpah **Source No.** 006 **PS Code** 15N/15E-20H03 S

Parameter		Possible Points	This Source	Score
Well Construction (All Aquifers)				
Sanitary Seal (Annular Seal) Depth 0 feet	None or less than 20 feet	0		
	Between 20 and 50 feet	6		
	50 feet or greater	10		
	Unknown	0	X	0
Surface Seal (concrete cap)	Not present or improperly constructed	0		
	Watertight, slopes away from well at least 2' laterally in all directions	4	X	4
	Unknown	0		
Flooding potential at well site	Subject to localized flooding (i.e. in low area or unsealed pit or vault) or within 100 year flood plain	0		
	Not subject to flooding	1	X	1
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	X	5
	Unknown	0		

Score	Effectiveness
0 to 35	Low
36 to 69	Moderate
70 to 100	High

Maximum Score = 70

Score 50

Effectiveness Moderate

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#6- Ivanpah **Source No.** 006 **PS Code** 15N/15E-20H03 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Agricultural/Rural					
Grazing (> 5 large animals or equivalent per acre) (H in Zone A, otherwise M)	N	N	N		
Concentrated Animal Feeding Operations (CAFOs) as defined in federal regulation1 (VH in Zone A, otherwise H)	N	N	N		
Animal Feeding Operations as defined in federal regulation2 (VH in Zone A, otherwise H)	N	N	N		
Other Animal operations (H in Zone A, otherwise M)	N	N	N		
Farm chemical distributor/ application service (H)	N	N	N		
Farm machinery repair (H)	N	N	N		
Septic systems - low density (<1/acre) (H in Zone A, otherwise L)	N	N	N		
Lagoons / liquid wastes (H)	N	N	N		
Machine shops (H)	N	N	N		
Pesticide/fertilizer/ petroleum storage & transfer areas (H)	N	N	N		
Agricultural Drainage (H in Zone A, otherwise M)	N	N	N		
Wells - Agricultural/ Irrigation (H)	N	N	N		
Managed Forests (M)	N	N	N		
Crops, irrigated (Berries, hops, mint, orchards, sod, greenhouses, vineyards, nurseries, vegetable) (M)	N	N	N		
Fertilizer, Pesticide/ Herbicide Application (M)	N	N	N		
Sewage sludge/biosolids application (M)	N	N	N		
Crops, nonirrigated (e.g., Christmas trees, grains, grass seeds, hay, pasture) (L) (includes drip-irrigated crops)	N	N	N		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#6- Ivanpah **Source No.** 006 **PS Code** 15N/15E-20H03 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
NPDES/WDR permitted discharges (H)	N	N	N		
Underground Injection of Commercial/Industrial Discharges (VH)	N	N	N		
Historic gas stations (VH)	N	N	N		
Historic waste dumps/ landfills (VH)	N	N	N		
Illegal activities/ unauthorized dumping (H)	N	N	N		
Injection wells/ dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	N	N	N		
Military installations (VH)	N	N	N		
Mining operations - Historic (VH)	N	N	N		
Mining operations - Active (VH)	N	N	N		
Mining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	N	N	N		
Salt Water Intrusion (H)	N	N	N		
Recreational area - surface water source (H)	N	N	N		
Underground storage tanks - Confirmed leaking tanks (VH)	N	N	N		
Underground storage tanks - Decommissioned - inactive tanks (L)	N	N	N		
Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)	N	N	N		
Underground storage tanks - Not yet upgraded or registered tanks (H)	N	N	N		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	N	N	N		
Above ground storage tanks (M)	N	N	Y		
Wells - Water supply (M)	Y	Y	Y		
Construction/demolition staging areas (M)	N	N	Y		
Contractor or government agency equipment storage yards (M)	N	N	Y		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Inventory of Possible Contaminating Activities (PCA Inventory)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#6- Ivanpah **Source No.** 006 **PS Code** 15N/15E-20H03 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
Dredging (M)	N	N	N		
Transportation corridors - Freeways/state highways (M)	N	N	N		
Transportation corridors - Railroads (M)	N	N	N		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways (herbicide use areas) (M)	N	N	N		
Transportation corridors - Roads/ Streets (L)	Y	Y	Y		
Hospitals (M)	N	N	N		
Storm Drain Discharge Points (M)	N	N	N		
Storm Water Detention Facilities (M)	N	N	N		
Artificial Recharge Projects - Injection wells (potable water) (L)	N	N	N		
Artificial Recharge Projects - Injection wells (non-potable water) (M)	N	N	N		
Artificial Recharge Projects - Spreading Basins (potable water) (L)	N	N	N		
Artificial Recharge Projects - Spreading Basins (non-potable water) (M)	N	N	N		
Medical/dental offices/clinics (L)	N	N	N		
Veterinary offices/clinics (L)	N	N	N		
Surface water - streams/ lakes/rivers (L)	N	N	N		
Wells - monitoring, test holes (L)	N	N	N		

Y = Yes N = No U = Unknown

* = A contaminant potentially associated with this activity has been detected in the water supply.

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Ranking

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#6- Ivanpah **Source No.** 006 **PS Code** 15N/15E-20H03 S

Completed by Scott Rose **Date** April, 2001

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Wells - Water supply (M)		3	5	3	11
A	Transportation corridors - Roads/ Streets (L)		1	5	3	9
B5	Wells - Water supply (M)		3	3	3	9

*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment

Water System

Moly Corp Inc

San Bernardino County

Water Source

Well#7-Ivanpah

Assessment Date

April, 2001

California Department of Health Services
Drinking Water Field Operations Branch
LPA San Bernardino County

District No.	**66**
System No.	**3600172**
Source No.	**007**
PS Code	**15N/15E-21E01 S**

Assessment Summary

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#7-Ivanpah **Source No.** 007 **PS Code** 15N/15E-21E01 S

Completed by Scott Rose **Date** April, 2001

Description of System and Source

The Moly Corp Inc water system is located in San Bernardino County and serves the Mt Pass community and several buildings related to mining and milling. There are approximately 10 service connections serving a population of200.

The drinking water source for the Moly Corp Inc water system is from two well fields,; Shadow Valley and Ivanpah Valley. General land use is natural /undeveloped .

Assessment Procedures

A Field survey was done to assess any hazards

Discussion of Vulnerability

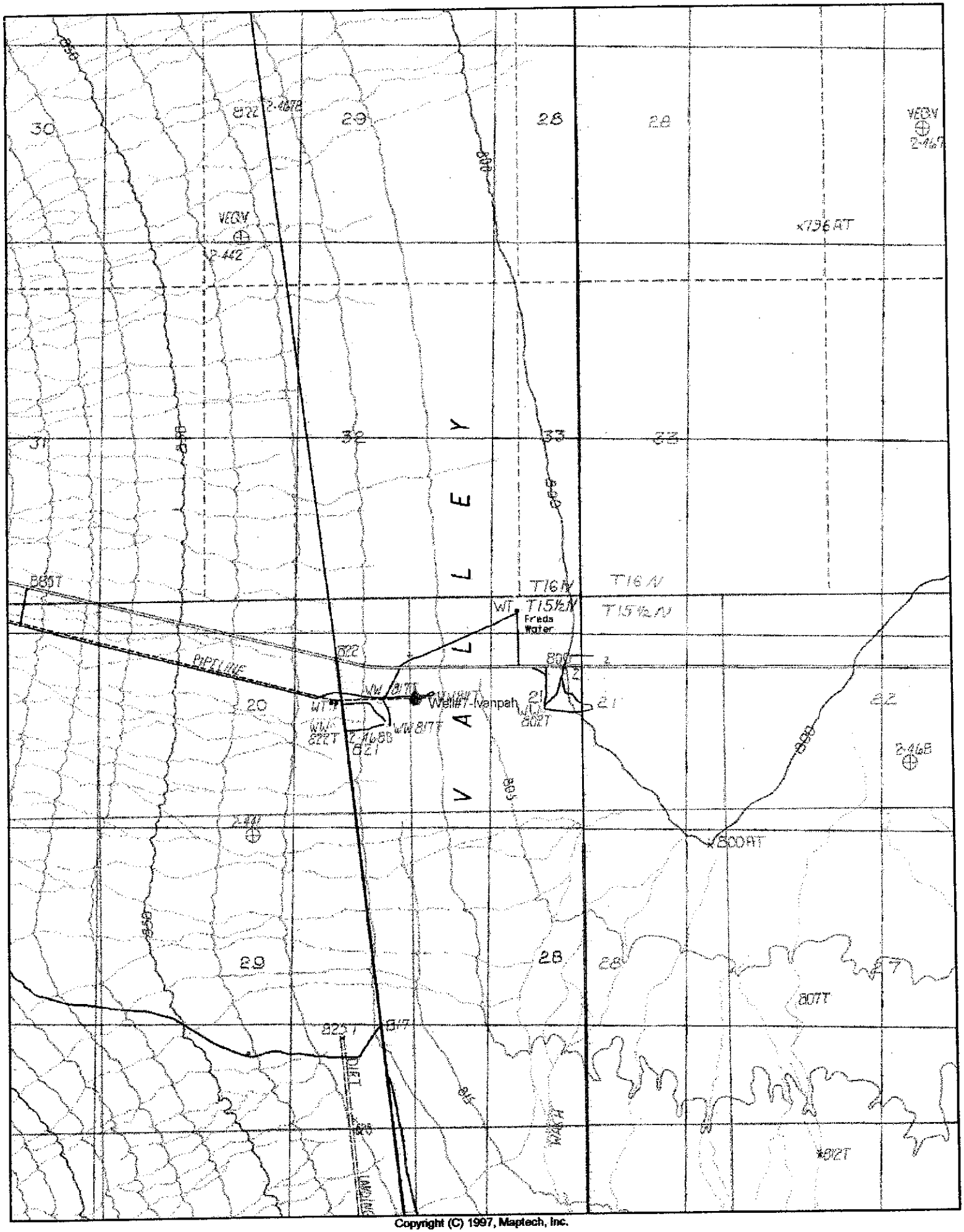
This well field was most vulnerable to onsite storage of Government equipment, during investigation of waste discharges from the mining process water to an evaporation pond >1mile away.

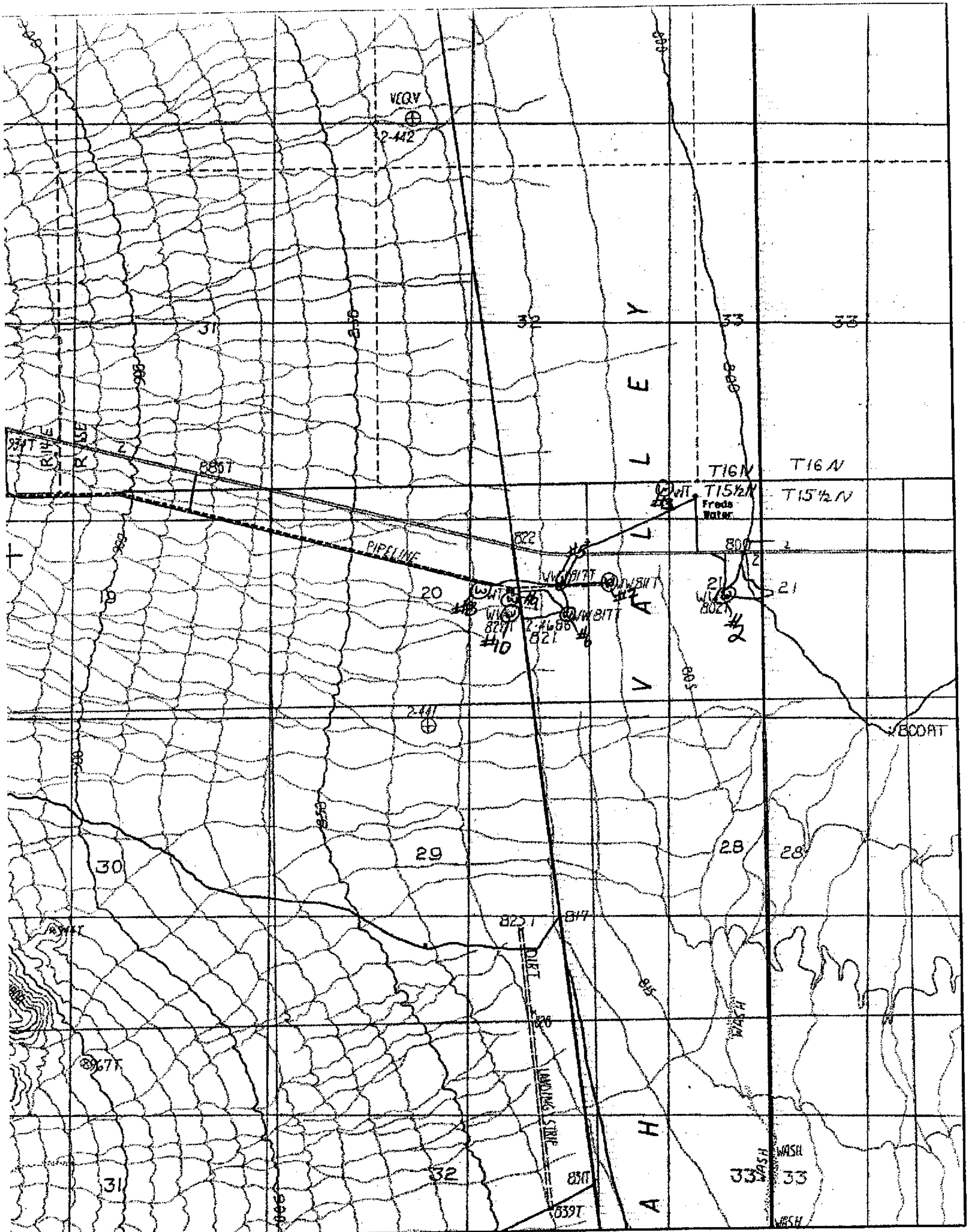
Contents of this Assessment

Yes [X]	No [ ]	**Assessment Summary**
Yes [X]	No [ ]	**Vulnerability Summary**
Yes [X]	No [ ]	**Source Location Form**
Yes [X]	No [ ]	**Delineation of Ground Water Protection Zones**
Yes [X]	No [ ]	**Physical Barrier Effectiveness Checklist**
Yes [X]	No [ ]	**Well Data Sheet**
Yes [X]	No [ ]	**Inventory of Possible Contaminating Activities**
Yes [X]	No [ ]	**Vulnerability Ranking**
Yes [X]	No [ ]	**Assessment Map**

Comments

Access to the well #7 was secured by a locked fence





MolyCorp Ivanpah Valley Well Field

Drinking Water Source Assessment and Protection (DWSAP) Program

GPS Field Data Sheet

Data Dictionary File: DD20010305.TXT

District Name: San Bernardino County District No.: 66 County: San Bernardino

System Name: Moly Corp Inc System No.: 3600172

Source Name: Well#7-Ivanpah Source No.: 007 PS Code: 15N/15E-21

Your Name: Dwane Pianalto Date: 3/6/01

Rover File Name: R030618A Time: 1:00 am (pm)

Nearest Base Station (select one)

- ☐ Blythe [Blythe Base Station]
- ☒ Las Vegas [Las Vegas Valley Water District Base Station]
- ☐ Ridgecrest (China Lake) [China Lake USN Base Station]
- ☐ Torrance [Torrance Base Station]

Offset Location? ☐ Offset Angle _____ degrees Offset Distance _____ meters

Site Sketch

Site Description _____

Comments _____

Well Data

System Name: Ivanpah Valley Well Field No:

Source of Information: Evaluation of Water Well Field 8/14/79

Collected By: Date:

Number or Name	Ivanpah Well #7	Active
State Well Number	15N/15E2K(E01)?	
Location (Cross Streets,etc)	Nipton Rd. & Ivanpah Rd.	
Date Drilled	8/77	
Neighborhood	open desert	
Lot Size	n/a	
Distance To: Sewer	n/a	
Sewage Disposal		
Abandoned Well	1,900 ft (approx)	
Property Line	1,000 ft	
Housing: Type	n/a	
Condition		
Pit Depth (if any)		
Floor (material)		
Drainage		
Well Depth	1,000 ft	
Drillers Report on File (yes or no)	no	
Casing: Depth(s)	1,000 ft	
Diameter(s)	10 inches	
Material	steel	
Height above Floor	n/a	
Distance to perforations	200 ft	
Surface Sealed (yes or no)	not known	
Gravel Pack (yes or no)	not known	
Annular Seal (depth)	not known	
Impervious Strata: Thickness	more than 700 ft	
Depth to	330 ft	
Water Levels: Static	158 ft (8/20/93)	
Pumping	not known	
Pump: Make	Grundfos	
Type	submersible	
Production (gpm)	145 (average)	
Depth to Bowls	560 ft (approx)	
Lubrication	sealed motor	
Power	electric	
Auxiliary Power	n/a	
Control	level control/on demand	
Discharge Location	Mountain Pass Plant	
Discharge To	fresh water storage tanks	
Pump to Waste (yes or no)	no	
Frequency of Use	contstant/daily	
Flood Hazard	no	
Remarks and Defects		

Revised: 4/1/93

Drinking Water Source Assessment and Protection (DWSAP) Program

Delineation of Ground Water Protection Zones

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#7-Ivanpah **Source No.** 007 **PS Code** 15N/15E-21E01 S

Completed by Scott Rose **Date** April, 2001

Method Used to Delineate Protection Zones

X 1. Calculated Fixed Radius

2. Modified Calculated Fixed Radius (Attach documentation for direction of ground water flow.)
3. More Detailed Methods
4. Arbitrary Fixed Radius (For use only by or permission of DHS)

Maximum Pumping Rate of Well (Q)	125	gallons/minute	
	202	acre feet/year	
	8,783,375	cubic feet/year	
Effective Porosity	0.20	%	[X] Default Value
Screened Interval of Well	800	feet	[ ] Default Value

Protection Zone	Calculated Value	Minimum Value	Radius of Protection Zone
Zone A - 2 Year TOT*	187 Feet	600 Feet	**600** Feet
Zone B5 - 5 Year TOT*	296 Feet	1,000 Feet	**1,000** Feet
Zone B10 - 10 Year TOT*	418 Feet	1,500 Feet	**1,500** Feet

Drinking Water Source Assessment and Protection (DWSAP) Program

Physical Barrier Effectiveness (PBE)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#7-Ivanpah **Source No.** 007 **PS Code** 15N/15E-21E01 S

Completed by Scott Rose **Date** April, 2001

Parameter		Possible Points	This Source	Score
Type of Aquifer				
Confinement				
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer		0	X	0
2. Confined		50		
Aquifer Material (Unconfined Aquifers)				
Type of material within aquifer				
1. Porous Media (Interbedded sands, silts, clays, gravels) with continuous clay layer minimum 25' thick above water table within Zone A		20	X	20
2. Porous Media (Interbedded sands, silts, clays, gravels)		10		
3. Fractured rock (Low Physical Barrier Effectiveness - no further questions required)		0		
Pathways of Contamination (All Aquifers)				
Presence of Abandoned or Improperly Destroyed Wells				
1. Present within Zone A (2 year TOT distance)	Yes	0		
	No	5	X	5
	Unknown	0		
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0		
	No	3	X	3
	Unknown	0		
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0		
	No	2	X	2
	Unknown	0		
Static Water Conditions (Unconfined Aquifers)				
Depth to Static Water (DTW) 160 feet	0 to 20 feet	0		
	20 to 50 feet	2		
	50 to 100 feet	6		
	Greater than 100 feet	10	X	10
	Unknown	0		
Well Operation (Unconfined Aquifers)				
Depth to Uppermost Perforations (DUP) 200 feet				
Maximum Pumping Rate of Well (Q) 125 gallons/minute				
Length of Screened Interval (H) 800 feet				
	Less than 5	0		
[DUP - DTW / Q/H] 256.00	Between 5 and 10	5		
	Greater than 10	10	X	10
	Unknown	0		

Drinking Water Source Assessment and Protection (DWSAP) Program

Physical Barrier Effectiveness (PBE)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#7-Ivanpah **Source No.** 007 **PS Code** 15N/15E-21E01 S

Parameter		Possible Points	This Source	Score
Well Construction (All Aquifers)				
Sanitary Seal (Annular Seal) Depth 0 feet	None or less than 20 feet	0		
	Between 20 and 50 feet	6		
	50 feet or greater	10		
	Unknown	0	X	0
Surface Seal (concrete cap)	Not present or improperly constructed	0		
	Watertight, slopes away from well at least 2' laterally in all directions	4	X	4
	Unknown	0		
Flooding potential at well site	Subject to localized flooding (i.e. in low area or unsealed pit or vault) or within 100 year flood plain	0		
	Not subject to flooding	1	X	1
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	X	5
	Unknown	0		

Score	Effectiveness
0 to 35	Low
36 to 69	Moderate
70 to 100	High

Maximum Score = 70

Score 60

Effectiveness Moderate

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#7-Ivanpah **Source No.** 007 **PS Code** 15N/15E-21E01 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Agricultural/Rural					
Grazing (> 5 large animals or equivalent per acre) (H in Zone A, otherwise M)	N	N	N		
Concentrated Animal Feeding Operations (CAFOs) as defined in federal regulation1 (VH in Zone A, otherwise H)	N	N	N		
Animal Feeding Operations as defined in federal regulation2 (VH in Zone A, otherwise H)	N	N	N		
Other Animal operations (H in Zone A, otherwise M)	N	N	N		
Farm chemical distributor/ application service (H)	N	N	N		
Farm machinery repair (H)	N	N	N		
Septic systems - low density (<1/acre) (H in Zone A, otherwise L)	N	N	N		
Lagoons / liquid wastes (H)	N	N	N		
Machine shops (H)	N	N	N		
Pesticide/fertilizer/ petroleum storage & transfer areas (H)	N	N	N		
Agricultural Drainage (H in Zone A, otherwise M)	N	N	N		
Wells - Agricultural/ Irrigation (H)	N	N	N		
Managed Forests (M)	N	N	N		
Crops, irrigated (Berries, hops, mint, orchards, sod, greenhouses, vineyards, nurseries, vegetable) (M)	N	N	N		
Fertilizer, Pesticide/ Herbicide Application (M)	N	N	N		
Sewage sludge/biosolids application (M)	N	N	N		
Crops, nonirrigated (e.g., Christmas trees, grains, grass seeds, hay, pasture) (L) (includes drip-irrigated crops)	N	N	N		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#7-Ivanpah **Source No.** 007 **PS Code** 15N/15E-21E01 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
NPDES/WDR permitted discharges (H)	N	N	N		
Underground Injection of Commercial/Industrial Discharges (VH)	N	N	N		
Historic gas stations (VH)	N	N	N		
Historic waste dumps/ landfills (VH)	N	N	N		
Illegal activities/ unauthorized dumping (H)	N	N	N		
Injection wells/ dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	N	N	N		
Military installations (VH)	N	N	N		
Mining operations - Historic (VH)	N	N	N		
Mining operations - Active (VH)	N	N	N		
Mining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	N	N	N		
Salt Water Intrusion (H)	N	N	N		
Recreational area - surface water source (H)	N	N	N		
Underground storage tanks - Confirmed leaking tanks (VH)	N	N	N		
Underground storage tanks - Decommissioned - inactive tanks (L)	N	N	N		
Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)	N	N	N		
Underground storage tanks - Not yet upgraded or registered tanks (H)	N	N	N		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	N	N	N		
Above ground storage tanks (M)	N	N	N		
Wells - Water supply (M)	Y	Y	Y		
Construction/demolition staging areas (M)	N	N	Y		
Contractor or government agency equipment storage yards (M)	N	N	Y		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Inventory of Possible Contaminating Activities (PCA Inventory)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#7-Ivanpah **Source No.** 007 **PS Code** 15N/15E-21E01 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
Dredging (M)	N	N	N		
Transportation corridors - Freeways/state highways (M)	N	N	N		
Transportation corridors - Railroads (M)	N	N	N		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways (herbicide use areas) (M)	N	N	N		
Transportation corridors - Roads/ Streets (L)	Y	Y	Y		
Hospitals (M)	N	N	N		
Storm Drain Discharge Points (M)	N	N	N		
Storm Water Detention Facilities (M)	N	N	N		
Artificial Recharge Projects - Injection wells (potable water) (L)	N	N	N		
Artificial Recharge Projects - Injection wells (non-potable water) (M)	N	N	N		
Artificial Recharge Projects - Spreading Basins (potable water) (L)	N	N	N		
Artificial Recharge Projects - Spreading Basins (non-potable water) (M)	N	N	N		
Medical/dental offices/clinics (L)	N	N	N		
Veterinary offices/clinics (L)	N	N	N		
Surface water - streams/ lakes/rivers (L)	N	N	N		
Wells - monitoring, test holes (L)	N	N	N		

Y = Yes N = No U = Unknown

* = A contaminant potentially associated with this activity has been detected in the water supply.

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Ranking

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#7-Ivanpah **Source No.** 007 **PS Code** 15N/15E-21E01 S

Completed by Scott Rose **Date** April, 2001

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Wells - Water supply (M)		3	5	3	11
A	Transportation corridors - Roads/ Streets (L)		1	5	3	9
B5	Wells - Water supply (M)		3	3	3	9

*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Summary

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well#7-Ivanpah **Source No.** 007 **PS Code** 15N/15E-21E01 S

Completed by Scott Rose **Date** April, 2001

THE FOLLOWING INFORMATION MUST BE INCLUDED IN THE SYSTEM CONSUMER CONFIDENCE REPORT

A source water assessment was conducted for the **Well#7-Ivanpah**

of the **Moly Corp Inc** water system in **April, 2001** .

The source is considered most vulnerable to the following activities not associated with any detected contaminants:

Wells - Water supply

A copy of the complete assessment may be viewed at:

San Bernardino County Government Center
385 North Arrowhead Ave.
San Bernardino, CA 92415-0160

You may request a summary of the assessment be sent to you by contacting:

Scott Rose
REHS
(909) 387-4657

Drinking Water Source Assessment

Water System

Moly Corp Inc

San Bernardino County

Water Source

Well #8 at Ivanpah

Assessment Date

April, 2001

California Department of Health Services
Drinking Water Field Operations Branch
LPA San Bernardino County

District No.	**66**
System No.	**3600172**
Source No.	**008**
PS Code	**15N/15E-20G01 S**

Drinking Water Source Assessment and Protection (DWSAP) Program

Assessment Summary

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

Completed by Scott Rose **Date** April, 2001

Description of System and Source

The Moly Corp Inc water system is located in San Bernardino County and serves the Mt. Pass community and there are approximately 10 service connections serving a population of 200.
The drinking water source for the Moly Corp Inc water system is from two well fields located in Shadow Valley and Ivanpah Valley. General land use is rural conservation undeveloped.

Assessment Procedures

The assessment of the source Well #8 at Ivanpah was conducted by County office, and Water System staff.
The following sources of information were used in the assessment: water system files, County records, previous study, etc].

Procedures used to conduct the assessment include: Field Survey and visual inspection.

Discussion of Vulnerability

This well field was most vulnerable to onsite storage of Government equipment, during investigation of waste discharges from the mining process water to an evaporation pond >1mile away.

Contents of this Assessment

Yes [X]	No [ ]	**Assessment Summary**
Yes [X]	No [ ]	**Vulnerability Summary**
Yes [X]	No [ ]	**Source Location Form**
Yes [X]	No [ ]	**Delineation of Ground Water Protection Zones**
Yes [X]	No [ ]	**Physical Barrier Effectiveness Checklist**
Yes [X]	No [ ]	**Well Data Sheet**
Yes [X]	No [ ]	**Inventory of Possible Contaminating Activities**
Yes [X]	No [ ]	**Vulnerability Ranking**
Yes [X]	No [ ]	**Assessment Map**

Comments

Access to the well #8 was secured by a locked fence

Drinking Water Source Assessment and Protection (DWSAP) Program

GPS Field Data Sheet

Data Dictionary File DD20010305.TXT

District Name San Bernardino County District No. 66 County San Bernardino

System Name Moly Corp Inc System No. 3600172

Source Name Well 08 at Ivanpah Source No. 008 PS Code 3600172-00

Your Name Dwane Pianalto Date 3/6/01

Rover File Name R030618A Time 1:05 am (pm)

Nearest Base Station (select one)

- ☐ Blythe [Blythe Base Station]
- ☒ Las Vegas [Las Vegas Valley Water District Base Station]
- ☐ Ridgecrest (China Lake) [China Lake USN Base Station]
- ☐ Torrance [Torrance Base Station]

Site Sketch

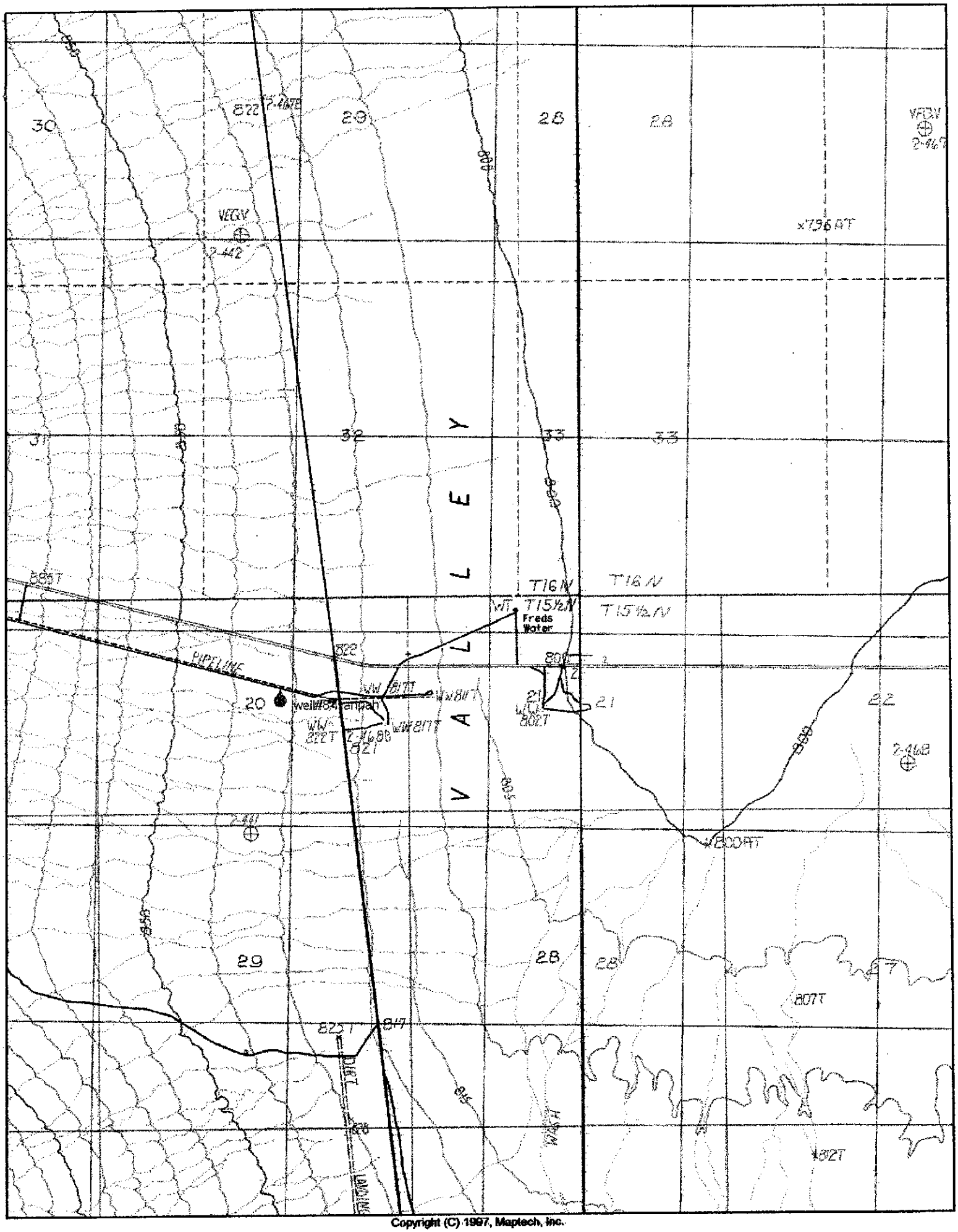
Offset Location? ☐

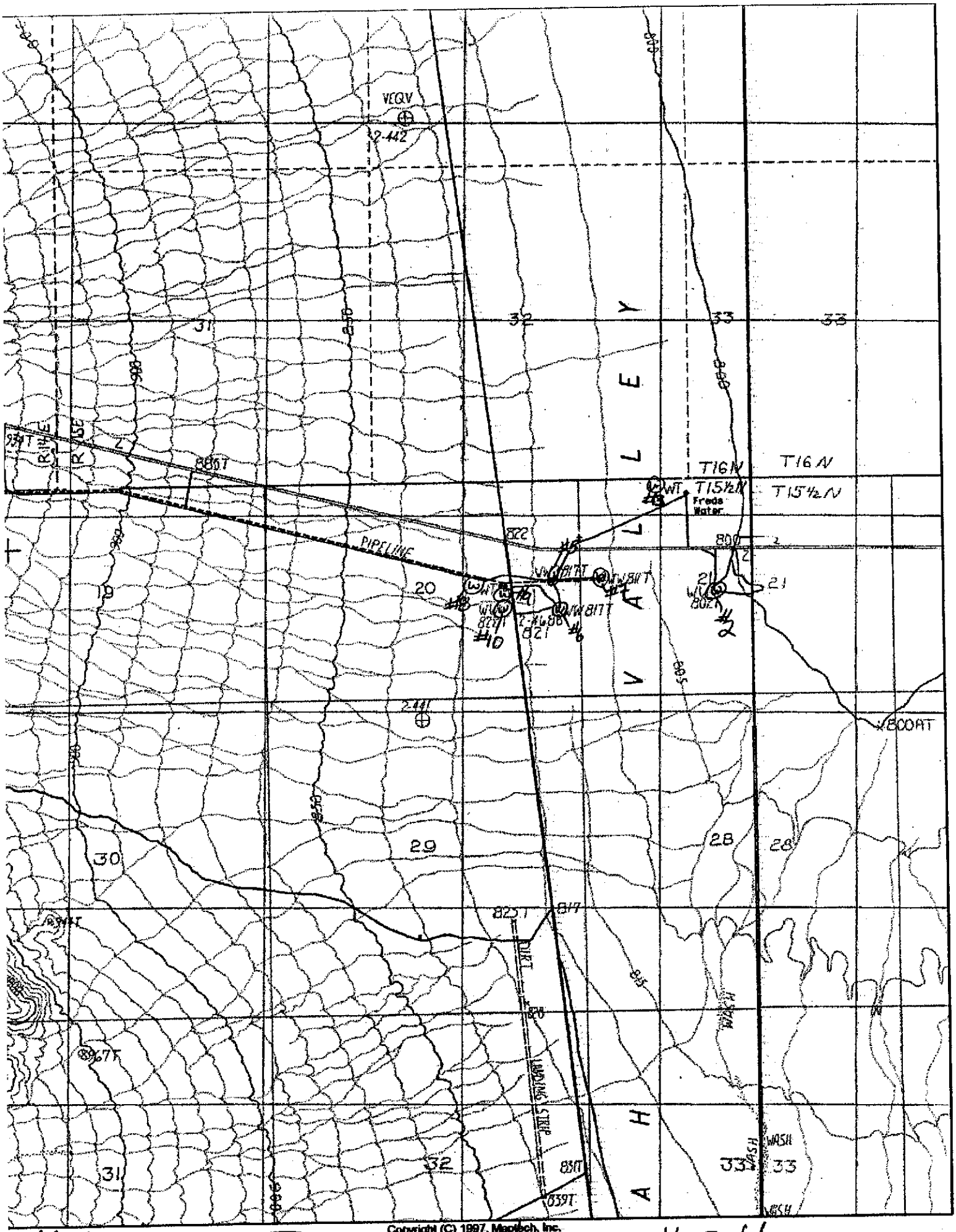
Offset Angle _____ degrees

Offset Distance _____ meters

Site Description _____

Comments _____





MolyCorp Ivanpah Valley Well Field

Well Data

System Name: Ivanpah Valley Fresh Water Field No: _____
Source of Information: Well Completion Report
Collected By: Tony Garcia Date: _____

Number or Name	Ivanpah Well #8	Active
State Well Number	15N/15E 20 Q01 S	
Location (Cross Streets,etc)	Nipton Rd. & Ivanpah Rd.	
Date Drilled	April 15 - 25, 1980	
Neighborhood	open desert	
Lot Size	n/a	
Distance To: Sewer	n/a	
Sewage Disposal		
Abandoned Well	3,900 ft	
Property Line	1,700 ft	
Housing: Type	n/a	
Condition		
Pit Depth (if any)		
Floor (material)		
Drainage		
Well Depth	760 ft	
Drillers Report on File (yes or no)	yes	
Casing: Depth(s)	760 ft	
Diameter(s)	10 inches	
Material	steel	
Height above Floor	n/a	
Distance to perforations	260 ft	
Surface Sealed (yes or no)	yes	
Gravel Pack (yes or no)	yes	
Annular Seal (depth)	50 ft	
Impervious Strata: Thickness	80 ft	
Depth to	350 ft	
Water Levels: Static	not known	
Pumping	not known	
Pump: Make	Standard Pump, Inc.	
Type	submersible	
Production (gpm)	170 (average)	
Depth to Bowls	490 ft (approx)	
Lubrication	sealed motor	
Power	electrical	
Auxiliary Power	n/a	
Control	level control/on demand	
Discharge Location	Mountain Pass Plant	
Discharge To	fresh water holding tanks	
Pump to Waste (yes or no)	no	
Frequency of Use	constant/daily	
Flood Hazard	no	
Remarks and Defects		

Revised: 4/1/93

Drinking Water Source Assessment and Protection (DWSAP) Program

Delineation of Ground Water Protection Zones

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

Completed by Scott Rose **Date** April, 2001

Method Used to Delineate Protection Zones

X 1. Calculated Fixed Radius

2. Modified Calculated Fixed Radius (Attach documentation for direction of ground water flow.)
3. More Detailed Methods
4. Arbitrary Fixed Radius (For use only by or permission of DHS)

Maximum Pumping Rate of Well (Q)	**180**	gallons/minute	
	290	acre feet/year	
	12,648,060	cubic feet/year	
Effective Porosity	**0.20**	%	[X] Default Value
Screened Interval of Well	**500**	feet	[ ] Default Value

Protection Zone	Calculated Value	Minimum Value	Radius of Protection Zone
Zone A - 2 Year TOT*	284 Feet	600 Feet	**600** Feet
Zone B5 - 5 Year TOT*	449 Feet	1,000 Feet	**1,000** Feet
Zone B10 - 10 Year TOT*	635 Feet	1,500 Feet	**1,500** Feet

Drinking Water Source Assessment and Protection (DWSAP) Program

Physical Barrier Effectiveness (PBE)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

Completed by Scott Rose **Date** April, 2001

Parameter		Possible Points	This Source	Score
Type of Aquifer				
Confinement				
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer		0	X	0
2. Confined		50		
Aquifer Material (Unconfined Aquifers)				
Type of material within aquifer				
1. Porous Media (Interbedded sands, silts, clays, gravels) with continuous clay layer minimum 25' thick above water table within Zone A		20		
2. Porous Media (Interbedded sands, silts, clays, gravels)		10	X	10
3. Fractured rock (Low Physical Barrier Effectiveness - no further questions required)		0		
Pathways of Contamination (All Aquifers)				
Presence of Abandoned or Improperly Destroyed Wells				
1. Present within Zone A (2 year TOT distance)	Yes	0		
	No	5	X	5
	Unknown	0		
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0		
	No	3	X	3
	Unknown	0		
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0		
	No	2	X	2
	Unknown	0		
Static Water Conditions (Unconfined Aquifers)				
Depth to Static Water (DTW) 220 feet	0 to 20 feet	0		
	20 to 50 feet	2		
	50 to 100 feet	6		
	Greater than 100 feet	10	X	10
	Unknown	0		
Well Operation (Unconfined Aquifers)				
Depth to Uppermost Perforations (DUP) 265 feet				
Maximum Pumping Rate of Well (Q) 180 gallons/minute				
Length of Screened Interval (H) 500 feet				
	Less than 5	0		
[DUP - DTW / Q/H] 125.00	Between 5 and 10	5		
	Greater than 10	10	X	10
	Unknown	0		

Drinking Water Source Assessment and Protection (DWSAP) Program

Physical Barrier Effectiveness (PBE)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

Parameter		Possible Points	This Source	Score
Well Construction (All Aquifers)				
Sanitary Seal (Annular Seal) Depth **50** feet	None or less than 20 feet	0		
	Between 20 and 50 feet	6		
	50 feet or greater	10	X	10
	Unknown	0		
Surface Seal (concrete cap)	Not present or improperly constructed	0		
	Watertight, slopes away from well at least 2' laterally in all directions	4	X	4
	Unknown	0		
Flooding potential at well site	Subject to localized flooding (i.e. in low area or unsealed pit or vault) or within 100 year flood plain	0		
	Not subject to flooding	1	X	1
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	X	5
	Unknown	0		

Score	Effectiveness
0 to 35	Low
36 to 69	Moderate
70 to 100	High

Maximum Score = 70

Score 60

Effectiveness Moderate

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Commercial/Industrial					
Automobile- Body shops (H)	N	N	N		
Automobile- Car washes (M)	N	N	N		
Automobile- Gas stations (VH)	N	N	N		
Automobile- Repair shops (H)	N	N	N		
Boat services/repair/ refinishing (H)	N	N	N		
Chemical/petroleum pipelines (H)	N	N	N		
Chemical/petroleum processing/storage (VH)	N	N	N		
Dry cleaners (VH)	N	N	N		
Electrical/electronic manufacturing (H)	N	N	N		
Fleet/truck/bus terminals (H)	N	N	N		
Furniture repair/ manufacturing (H)	N	N	N		
Home manufacturing (H)	N	N	N		
Junk/scrap/salvage yards (H)	N	N	N		
Machine shops (H)	N	N	N		
Metal plating/ finishing/fabricating (VH)	N	N	N		
Photo processing/printing (H)	N	N	N		
Plastics/synthetics producers (VH)	N	N	N		
Research laboratories (H)	N	N	N		
Wood preserving/treating (H)	N	N	N		
Wood/pulp/paper processing and mills (H)	N	N	N		
Lumber processing and manufacturing (H)	N	N	N		
Sewer collection systems (H, if in Zone A, otherwise L)	N	N	N		
Parking lots/malls (>50 spaces) (M)	N	N	N		
Cement/concrete plants (M)	N	N	N		
Food processing (M)	N	N	N		
Funeral services/graveyards (M)	N	N	N		
Hardware/lumber/parts stores (M)	N	N	N		
Appliance/Electronic Repair (L)	N	N	N		

Y = Yes N = No U = Unknown

* = A contaminant potentially associated with this activity has been detected in the water supply.

Inventory of Possible Contaminating Activities (PCA Inventory)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Commercial/Industrial					
Office buildings/complexes (L)	N	N	N		
Rental Yards (L)	N	N	N		
RV/mini storage (L)	N	N	N		

Y = Yes N = No U = Unknown

* = A contaminant potentially associated with this activity has been detected in the water supply.

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Agricultural/Rural					
Grazing (> 5 large animals or equivalent per acre) (H in Zone A, otherwise M)	N	N	N		
Concentrated Animal Feeding Operations (CAFOs) as defined in federal regulation1 (VH in Zone A, otherwise H)	N	N	N		
Animal Feeding Operations as defined in federal regulation2 (VH in Zone A, otherwise H)	N	N	N		
Other Animal operations (H in Zone A, otherwise M)	N	N	N		
Farm chemical distributor/ application service (H)	N	N	N		
Farm machinery repair (H)	N	N	N		
Septic systems - low density (<1/acre) (H in Zone A, otherwise L)	N	N	N		
Lagoons / liquid wastes (H)	N	N	N		
Machine shops (H)	N	N	N		
Pesticide/fertilizer/ petroleum storage & transfer areas (H)	N	N	N		
Agricultural Drainage (H in Zone A, otherwise M)	N	N	N		
Wells - Agricultural/ Irrigation (H)	N	N	N		
Managed Forests (M)	N	N	N		
Crops, irrigated (Berries, hops, mint, orchards, sod, greenhouses, vineyards, nurseries, vegetable) (M)	N	N	N		
Fertilizer, Pesticide/ Herbicide Application (M)	N	N	N		
Sewage sludge/biosolids application (M)	N	N	N		
Crops, nonirrigated (e.g., Christmas trees, grains, grass seeds, hay, pasture) (L) (includes drip-irrigated crops)	N	N	N		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

Completed by Scott Rose **Date** April, 2001

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
NPDES/WDR permitted discharges (H)	N	N	N		
Underground Injection of Commercial/Industrial Discharges (VH)	N	N	N		
Historic gas stations (VH)	N	N	N		
Historic waste dumps/ landfills (VH)	N	N	N		
Illegal activities/ unauthorized dumping (H)	N	N	N		
Injection wells/ dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	N	N	N		
Military installations (VH)	N	N	N		
Mining operations - Historic (VH)	N	N	N		
Mining operations - Active (VH)	N	N	N		
Mining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	N	N	N		
Salt Water Intrusion (H)	N	N	N		
Recreational area - surface water source (H)	N	N	N		
Underground storage tanks - Confirmed leaking tanks (VH)	N	N	N		
Underground storage tanks - Decommissioned - inactive tanks (L)	N	N	N		
Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)	N	N	N		
Underground storage tanks - Not yet upgraded or registered tanks (H)	N	N	N		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	N	N	N		
Above ground storage tanks (M)	N	N	Y		
Wells - Water supply (M)	Y	Y	Y		
Construction/demolition staging areas (M)	N	Y	Y		
Contractor or government agency equipment storage yards (M)	Y	Y	Y		

Y = Yes N = No U = Unknown
*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Inventory of Possible Contaminating Activities (PCA Inventory)

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other					
Dredging (M)	N	N	N		
Transportation corridors - Freeways/state highways (M)	N	N	N		
Transportation corridors - Railroads (M)	N	N	N		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways (herbicide use areas) (M)	N	N	N		
Transportation corridors - Roads/ Streets (L)	Y	Y	Y		
Hospitals (M)	N	N	N		
Storm Drain Discharge Points (M)	N	N	N		
Storm Water Detention Facilities (M)	N	N	N		
Artificial Recharge Projects - Injection wells (potable water) (L)	N	N	N		
Artificial Recharge Projects - Injection wells (non-potable water) (M)	N	N	N		
Artificial Recharge Projects - Spreading Basins (potable water) (L)	N	N	N		
Artificial Recharge Projects - Spreading Basins (non-potable water) (M)	N	N	N		
Medical/dental offices/clinics (L)	N	N	N		
Veterinary offices/clinics (L)	N	N	N		
Surface water - streams/ lakes/rivers (L)	N	N	N		
Wells - monitoring, test holes (L)	N	N	N		

Y = Yes N = No U = Unknown

* = A contaminant potentially associated with this activity has been detected in the water supply.

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Ranking

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

Completed by Scott Rose **Date** April, 2001

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Contractor or government agency equipment storage yards (M)		3	5	3	11
A	Wells - Water supply (M)		3	5	3	11
A	Transportation corridors - Roads/ Streets (L)		1	5	3	9
B5	Construction/demolition staging areas (M)		3	3	3	9
B5	Contractor or government agency equipment storage yards (M)		3	3	3	9
B5	Wells - Water supply (M)		3	3	3	9

*** = A contaminant potentially associated with this activity has been detected in the water supply.**

Drinking Water Source Assessment

Water System

Moly Corp Inc

San Bernardino County

Water Source

Well #8 at Ivanpah

Assessment Date

April, 2001

California Department of Health Services
Drinking Water Field Operations Branch
LPA San Bernardino County

District No.	**66**
System No.	**3600172**
Source No.	**008**
PS Code	**15N/15E-20G01 S**

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Summary

District Name LPA San Bernardino County **District No.** 66 **County** San Bernardino

System Name Moly Corp Inc **System No.** 3600172

Source Name Well #8 at Ivanpah **Source No.** 008 **PS Code** 15N/15E-20G01 S

Completed by Scott Rose **Date** April, 2001

THE FOLLOWING INFORMATION MUST BE INCLUDED IN THE SYSTEM CONSUMER CONFIDENCE REPORT

A source water assessment was conducted for the **Well #8 at Ivanpah** of the **Moly Corp Inc** water system in **April, 2001**.

The source is considered most vulnerable to the following activities not associated with any detected contaminants:

Contractor or government agency equipment storage yards
Wells - Water supply

A copy of the complete assessment may be viewed at:

San Bernardino County Government Center
385 North Arrowhead
San Bernardino, CA 92415-0160

You may request a summary of the assessment be sent to you by contacting:

Scott Rose
REHS
(909) 387-4666

APPENDIX C

United States Department of the Interior

TAKE PRIDE IN AMERICA

BUREAU OF LAND MANAGEMENT
Southern Nevada District
Las Vegas Field Office
4701 N. Torrey Pines Drive
Las Vegas, NV 89130
http://www.blm.gov/nv/st/en/fo/lvfo.1.html

In Reply Refer To:
2800 (NVS0056)

FEB 05 2010

Ms. Sue Wainscott
Clark County Desert Conservation Program
333 North Rancho, Ste. 625
Las Vegas, NV 89106

Dear Ms. Wainscott:

On November 3, 2009 the Bureau of Land Management (BLM) received your letter pertaining to rights-of-way corridors for transportation and public utilities that were excepted and reserved to the United States in Patent No. 27-95-0022 (corridors). A meeting was held on December 11, 2009 to discuss the issue in more detail, with representatives present from Clark County, BLM, and the City of Boulder City. The purpose of this letter is to provide you with a response to your letter and to provide clarification on BLM's position relating to the subject corridors.

Your letter concluded that the procedure leading to incorporation of the corridors into the patent was not in compliance with Public Law 85-339, and therefore the corridors were not actually excepted and reserved to the United States. Public Law 85-339 had multiple compliance requirements by both the eventual patentee and the Department of the Interior. For various reasons, compliance with these requirements took approximately 37 years. Despite this breadth of time, BLM and the Colorado River Commission (CRC) completed this lands transfer in 1995 with no indication that either party believed there had been a failure to comply with the Public Law. What is clear is that almost 15 years ago the patent in question was issued with the exception and reservation provision and the CRC accepted that patent.

The BLM continues to maintain that the exception and reservation of the corridors in Patent No. 27-95-0022 created a legitimate federal interest under the jurisdiction of the BLM. Since the corridors are a federal interest under the jurisdiction of the BLM, it is the BLM's responsibility to continue administering them for the purposes for which they were created.

BLM will continue administering the rights-of-ways it has granted through these corridors, and process pending applications for areas within the subject corridors. You requested that Clark County be notified of pending applications and allowed an opportunity to comment prior to the BLM approving or denying the action. In accordance with the National Environmental Policy Act of 1969, as amended, Clark County will be given an opportunity to provide comments on the environmental analyses prepared for the subject projects.

In addition, we want to stress that we fully understand the importance of this area to Clark County and, as high-density desert tortoise habitat, to desert tortoise recovery. The BLM is accountable for ensuring that the administration of federally-authorized activities in the corridors will be done in a manner consistent with properly managing desert tortoise critical habitat.

If you have any questions regarding this information, please contact me at the address above, by calling (702) 515-5088, or by email at bransel@blm.gov.

Sincerely,

Beth Ransel

Beth Ransel
Assistant Field Manager
Division of Lands

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Southern Nevada District
Las Vegas Field Office
4701 N. Torrey Pines Drive
Las Vegas, NV 89130
http://www.blm.gov/nv/st/en/fo/lvfo.1.html

In Reply Refer To:
2800 (NVS0056)

FEB 1 0 2010

Ms. Linda M. Bullen
Lionel Sawyer & Collins
1700 Bank of America Plaza
300 South Fourth Street
Las Vegas, NV 89101

Dear Ms. Bullen:

On December 18, 2010 the Bureau of Land Management (BLM) received your letter pertaining to rights-of-way corridors for transportation and public utilities that were excepted and reserved to the United States in Patent No. 27-95-0022 (corridors). A meeting was held on December 11, 2009 to discuss the issue in more detail, with representatives present from Clark County, BLM, and the City of Boulder City. The purpose of this letter is to provide you with a response to your letter and to provide clarification on BLM's position relating to the subject corridors.

Your letter concluded that the procedure leading to incorporation of the corridors into the patent was not in compliance with Public Law 85-339, and therefore the corridors were not actually excepted and reserved to the United States. Public Law 85-339 had multiple compliance requirements by both the eventual patentee and the Department of the Interior. For various reasons, compliance with these requirements took approximately 37 years. Despite this breadth of time, BLM and the Colorado River Commission (CRC) completed this lands transfer in 1995 with no indication that either party believed there had been a failure to comply with the Public Law. What is clear is that almost 15 years ago the patent in question was issued with the exception and reservation provision and the CRC accepted that patent.

The BLM continues to maintain that the exception and reservation of the corridors in Patent No. 27-95-0022 created a legitimate federal interest under the jurisdiction of the BLM. Since the corridors are a federal interest under the jurisdiction of the BLM, it is the BLM's responsibility to continue administering them for the purposes for which they were created.

BLM will continue administering the rights-of-ways it has granted through these corridors, and process pending applications for areas within the subject corridors.

In addition, I want to stress that BLM fully understands the importance of this area, as high-density desert tortoise habitat, to desert tortoise recovery. The BLM is accountable for ensuring that the administration of federally-authorized activities in the corridors will be done in a manner consistent with properly managing desert tortoise critical habitat.

Your letter stated that several solar projects in the Eldorado Valley are in the development stage, and expressed an interest in working together to meet a construction schedule for December of 2010. The BLM is highly committed to helping the nation meet its "green energy future" through processing applications for and in support of renewable energy in an environmentally responsible manner. To assist in meeting this commitment, a BLM renewable energy coordination office (RECO) has been established for the Southern Nevada District. The RECO is aggressively processing applications received within the BLM Southern Nevada District for proposed renewable energy facilities.

It is noted in your letter that the BLM has to process actions in compliance with the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA), in addition to other laws. Compliance with both the NEPA and ESA is done on a project level, so it is imperative that the BLM receive project applications as early as possible to ensure timely processing.

In terms of requirements under the ESA, the BLM must consult with the US Fish and Wildlife Service (Service) on each Federal action that may effect listed species. Actions are assessed for impacts to desert tortoises as part of the authorization process for each application to ensure that BLM has the best available information to inform our decision and to ensure that the effects to the species are adequately minimized and mitigated. Consultation takes approximately 135 days following completion of a biological assessment.

In some cases an existing biological opinion (section 7 consultation) may exist that would adequately cover the action for incidental take. We currently hold a programmatic biological opinion that covers take of desert tortoises associated with rights-of-way outside the Las Vegas Valley (BO # 1-5-97-F-251). This biological opinion may be used for small actions (under 240 acres) authorized by BLM and can be used for actions within the designated corridors in the Eldorado Valley Transfer Act lands if the effects of the action fall within those analyzed in the biological opinion, the terms and conditions will adequately minimize effects to the species, and the biological opinion is still valid (anticipate end date as May 2010). This programmatic can not apply to any actions that take place all or in part within the Piute-Eldorado Area of Critical Environmental Concern to the south of the Eldorado Valley Transfer Act lands. It also does not cover lands managed by other Federal agencies. If a Federal action would cross multiple Federal jurisdictions, generally a new consultation would be conducted with one agency as lead.

With the close out of our existing programmatic biological opinion 1-5-97-F-251, we anticipate that we will be conducting section 7 consultation for each Federal action. It is our understanding that the Service is no longer issuing programmatic biological opinions such as

the one cited above. Any future consultations will likely need to be site specific. We may be able to offer some efficiency by bundling multiple actions into a single consultation. The best way to proceed is to ensure that project authorization schedules include sufficient time for development of a biological assessment (including any necessary surveys) and consultation with the Service.

In order to try to accommodate the timeframes referenced in your letter, please encourage any proponents of projects that are proposed to be located wholly or partially within the BLM administered corridors in the Eldorado Valley or that may include other BLM administered lands to file applications with BLM at the earliest possible stage in the process. If you have any questions regarding this information, please contact me at the address above, by calling (702) 515-5088, or by email at bransel@blm.gov.

Sincerely,

Beth Ransel
Assistant Field Manager
Division of Lands