

Preliminary Site Related  
Chemicals (SRC) Document  
Administrative Order on  
Consent Activities

**Nevada Power Company**  
Reid Gardner Station

**Final**  
November 2008  
20618.01

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## Certifications

### NPC Certification

I certify that this document and all attachments submitted to the Division were prepared under the direction or supervision of NPC in accordance with a system designed to gather and evaluate the information by appropriately qualified personnel. Based on my inquiry of the person or persons who manage the system(s) or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted and provided by NPC is, to the best of my knowledge and belief, true, accurate, and complete in all material respects. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Company: \_\_\_\_\_  
Date: \_\_\_\_\_

## Certified Environmental Manager Certification

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.

Signature: \_\_\_\_\_  
Name: Rebecca L. Svatos  
Title: Project Manager  
Company: Stanley Consultants  
Date: \_\_\_\_\_  
EM Certificate Number EM-1931  
EM Expiration Date: 9/30/2009

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# Introduction and Background

This Preliminary Site-Related Chemicals (SRC) Document has been prepared for the Nevada Power Company (NPC), Reid Gardner Generating Station (Station), located in Moapa, Nevada. NPC and the Nevada Division of Environmental Protection (NDEP) have negotiated an Administrative Order on Consent (AOC) for the Station which became effective on February 22, 2008. The AOC provides for the continuation of environmental contaminant characterization activities at the site. Additionally, the AOC allows for the identification and/or screening of corrective actions, and allows for the implementation and long-term operation and maintenance of the NDEP-approved corrective actions at, or associated with, the Station. The NDEP has primary authority and responsibility for regulatory oversight at the Station. This Preliminary SRC Document is being prepared in accordance with Section 3.1.7 of the Scope of Work that is Appendix B of the AOC.

The Station is a coal-fired electric power generation facility that produces approximately 600 MW of power from four generating units (Units 1,2,3 and 4). The Station is located within the Moapa Valley, a large, relatively flat-bottomed valley occupied by the Muddy River, a spring-fed perennial stream that bisects the Station property. Prior to 1964, the site was native desert or irrigated pasturelands. The Station became commercially operational in 1965 and evaporation ponds were constructed for treatment of scrubber blowdown waste water with the addition of SO<sub>2</sub> scrubbers on Units 1, 2, and 3 in 1976. Unit 4 is a joint ownership facility with the California Department of Water Resources (CDWR) as the majority owner (67.8%) that went into service in 1983.

The Station obtains its water supply from a combination of offsite groundwater wells and offsite surface water withdrawals from the Muddy River. The water is combined and stored in raw water storage ponds for use throughout the Station. Water is used onsite for cooling, flue gas desulfurization, and other uses. In order to reduce water usage, the Station recycles its water as much as possible. The flue gas desulfurization wastewater is discharged first to one of the ash

water settling ponds to allow suspended solids (fly ash) to settle out. The Station operates an onsite permitted solid waste disposal facility for ash, solids cleaned from the ash water settling and evaporation ponds, and various other facility wastes. The decanted wastewater is then discharged directly to one of the evaporation ponds for final wastewater disposal; there are no surface water discharges from the Station. Cooling water blowdown is treated and reused as scrubber water makeup.

Because the Station wastewater contains dissolved solids and because these dissolved solids are concentrated by process water recycling, the wastewater discharged to the evaporation ponds is high in total dissolved solids (TDS). The evaporation ponds were originally designed and constructed, according to regulations in effect at the time, utilizing clay material with clay berms. Seepage over time has resulted in elevated TDS in the groundwater.

In addition to the groundwater contamination associated with the onsite ponds, a variety of past activities have contributed to onsite soil and/or groundwater contamination. Various areas of past solid waste disposal onsite, an area of diesel fuel leakage, and other isolated areas of soil and/or groundwater contamination have been identified. All areas of soil and groundwater contamination attributable to the Station operations will be addressed through implementation of the AOC.

The purpose of this Document is provide a preliminary summary of chemical constituents that either have been detected in soil, groundwater, and/or surface water at the site or have the reasonable potential to be present in soil, groundwater, and/or surface water at the site .

Table 1 – Site Related Chemicals, included in Appendix A, summarizes site related chemicals that may be present at the site. These chemicals were compiled by reviewing Quarterly Monitoring Reports, the February 20, 2002 Revised Hydrogeologic Characterization Report prepared by NPC, various Toxic Release Inventory (TRI) and Tier II evaluations, available data from wastewater and ash/sludge, and other reports (e.g., prior subsurface investigations, laboratory data, waste characterization reports, etc.). Documentation reviewed during the creation of this table is listed in the Encyclopedia of Supporting Documentation that was previously submitted to the NDEP and approved on January 11, 2008. References to specific reports in the Encyclopedia of Supporting Documentation by tab number and/or title are included in the notes column of the table and in Section 2 of this document. Additionally, there is potential for unknown contaminants to be present at the site. During future characterization activities, an appropriate level of broad suite analyses may be included in areas of the site where contaminants are not well-known.

Upon approval of the Preliminary SRC document by the NDEP, an assessment of background conditions will be conducted at the Reid Gardner Station to determine the background levels of site related chemicals at the site. A final SRC document will be prepared based on the results of the assessment of background conditions.

The Site-Wide Conceptual Model will then focus on those site related chemicals included in the final document. The concentrations detected during site characterization efforts will be compared with background levels established during the assessment of background conditions as well as other applicable standards to evaluate the need for remediation.

## Section 2

### References

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Radioactive Material License, Nevada State Board of health, May 31, 1986 (Document Number 284)

Product Recovery Testing at the Reid Gardner Power Plant, Intellus Corporation, November 1, 1986 (Document Number 82)

Limited Site Characterization, Dissolved Chlorinated Solvents, Area 6, Nevada Power Company, March 22, 2005 (Document Number 103)

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Lysimeter and Monitor Well Installation, Kleinfelder and Associates, January 10, 1997 (Document Number 34)

Diesel Fuel Release, Various Authors, May 7, 1999 (Document Number 239)

Storage Barrels, Nevada Power Company, October 28, 1986 (Document Number 234)

Supplemental Phase II Environmental Site Assessment - Task 25 Report - Waste Management Unit Assessment, Kleinfelder and Associates, October 17, 2000 (Document Number 92)

Phase II Environmental Assessment Report, Black and Veatch, June 1, 1999 (Document Number 50)

Notice of Violation, Nevada Division of Environmental Protection, January 10, 1994.

Response to Finding of Alleged Violations, Nevada Power Company, February 23, 1994 (Document Number 303)

Revised Hydrogeological Characterization Report, Nevada Power Company, February 20, 2002 (Document Number 109)

## Appendix A

### Table 1 Preliminary Site Related Chemicals