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DOE/NV--1134-ADD



# Addendum to the Closure Report for Corrective Action Unit 322: Areas 1 & 3 Release Sites and Injection Wells Nevada Test Site, Nevada

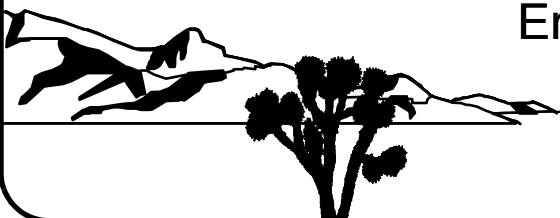
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**ADDENDUM TO THE CLOSURE REPORT  
FOR CORRECTIVE ACTION UNIT 322:  
AREAS 1 & 3 RELEASE SITES AND  
INJECTION WELLS  
NEVADA TEST SITE, NEVADA**

U.S. Department of Energy  
National Nuclear Security Administration  
Nevada Site Office  
Las Vegas, Nevada

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### **Addendum to the Closure Report for Removal of the Use Restriction**

This document constitutes an addendum to the June 2006, Closure Report for Corrective Action Unit 322: Areas 1 & 3 Release Sites and Injection Wells as described in the document *Recommendations and Justifications for Modifications for Use Restrictions Established under the U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office Federal Facility Agreement and Consent Order* (UR Modification document) dated February 2008. The UR Modification document was approved by NDEP on February 26, 2008. The approval of the UR Modification document constituted approval of each of the recommended UR modifications. In conformance with the UR Modification document, this addendum consists of:

- This cover page that refers the reader to the UR Modification document for additional information
- The cover and signature pages of the UR Modification document
- The NDEP approval letter
- The corresponding section of the UR Modification document

This addendum provides the documentation justifying the cancellation of the URs for:

- CAS 01-25-01, AST Release
- CAS 03-25-03, Mud Plant AST Diesel Release

These URs were established as part of *Federal Facility Agreement and Consent Order* (FFACO) corrective actions and were based on the presence of contaminants at concentrations greater than the action levels established at the time of the initial investigation (FFACO, 1996; as amended August 2006).

Since these URs were established, practices and procedures relating to the implementation of risk-based corrective actions (RBCA) have changed. Therefore, these URs were re-evaluated against the current RBCA criteria as defined in the *Industrial Sites Project Establishment of Final Action Levels* (NNSA/NSO, 2006c). This re-evaluation consisted of comparing the original data (used to define the need for the URs) to risk-based final action levels (FALs) developed using the current Industrial Sites RBCA process.

The re-evaluation resulted in a recommendation to remove these URs because contamination is not present at these sites above the risk-based FALs. Requirements for inspecting and maintaining these URs will be canceled, and the postings and signage at each site will be removed. Fencing and posting may be present at these sites that are unrelated to the FFACO URs such as for radiological control purposes as required by the *NV/YMP Radiological Control Manual* (NNSA/NSO, 2004f). This modification will not affect or modify any non-FFACO requirements for fencing, posting, or monitoring at these sites.

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Recommendations and Justifications for  
Modifications for Use Restrictions Established  
under the U.S. Department of Energy,  
National Nuclear Security Administration  
Nevada Site Office  
*Federal Facility Agreement and Consent Order*

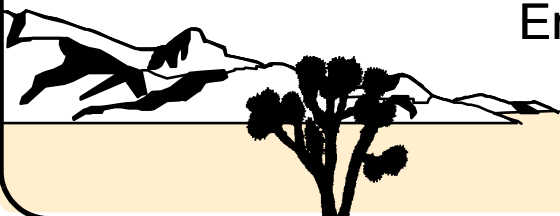
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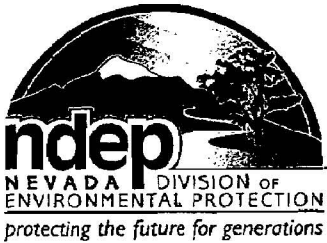
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**Recommendations and Justifications for Modifications for  
Use Restrictions Established under the U.S. Department of Energy,  
National Nuclear Security Administration Nevada Site Office  
*Federal Facility Agreement and Consent Order***

Approved by: /s/ Kevin J. Cabbie Date: 02/05/2008  
Kevin J. Cabbie  
Federal Sub-Project Director  
Industrial Sites Sub-Project

Approved by: /s/ John B. Jones Date: 02/04/2008  
John B. Jones  
Acting Federal Project Director  
Environmental Restoration Project



# STATE OF NEVADA

Department of Conservation & Natural Resources  
DIVISION OF ENVIRONMENTAL PROTECTION

Jim Gibbons, Governor

Allen Biaggi, Director

Leo M. Drozdoff, P.E., Administrator

February 26, 2008

John B. Jones  
Acting Federal Project Director  
Environmental Restoration Project  
National Nuclear Security Administration  
Nevada Site Office  
P. O. Box 98518  
Las Vegas, NV 89193-8518

RE: Approval of Recommendations and Justifications for Modifications for Use Restrictions  
Established under the U.S. Department of Energy, National Nuclear Security  
Administration, Nevada Site Office *Federal Facility Agreement and Consent Order*

Dear Mr. Jones:

The Nevada Division of Environmental Protection, Bureau of Federal Facilities (NDEP) staff has received and reviewed the February 2008 final report for Recommendations and Justifications for Modifications for Use Restrictions Established under the U.S. Department of Energy, National Nuclear Security Administration, Nevada Site Office. The NDEP approves the requested changes to the previously agreed upon use restrictions for those Corrective Action Sites (CASS) as described in the report.

Address any questions regarding this matter to either Ted Zaferatos at (702) 486-2850, ext. 234, or me at (702) 486-2850, ext. 231.

Sincerely,

/s/ Tim Murphy

T.H. Murphy  
Chief  
Bureau of Federal Facilities

TZ

cc: E.F. DiSanza, WMP, NNSA/NSO  
FFACO Group, PSG, NNSA/NSO, Las Vegas, NV  
David C. Loewer, DTRA/CXT1, M/S 645, Mercury, NV  
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R.F. Boehlecke, SNJV, Las Vegas, NV  
K. J. Cabble, ERP, NNSA/NSO, Las Vegas, NV  
John Wong, Jeff MacDougall, Dennis Nicodemus, NDEP Las Vegas, NV



## **9.0 CAU 322, CAS 01-25-01 – AST Release**

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### **9.1 CAS Description**

The former aboveground storage tank (AST) is located in Area 1, within the boundaries of the Shaker Plant, in the northern portion of plant grounds. The AST was located within a berm constructed of earth and gravel, and the berm floor contains several pieces of large wooden plywood used for tank support. Additional pieces of heavy railroad ties were discovered under the berm floor surface during excavation. The berm once contained a 10,000-gal diesel fuel AST, which was relocated approximately 40 ft southeast of the CAS. The AST provided fuel for the operation of the Shaker Plant (NNSA/NSO, 2004e).

### **9.2 Current Use Restriction Description**

The future use of any land affected by this UR is restricted from any DOE or Air Force activity that may alter or modify the containment control, as approved by the state and identified in the CAU CR or other CAU documentation, unless appropriate concurrence is obtained in advance. As part of closure activities, fencing was erected around the rectangular AST berm to limit access to the interior of the berm, and four UR signs were posted around the perimeter of the berm. Site monitoring requirements for the UR include periodic visual inspections of UR postings and fencing. These are required annually for the first five years, followed by every five years, for a total of 30 years (NNSA/NSO, 2006b).

### **9.3 Basis for Current Use Restriction**

Samples were analyzed for TPH (DRO and GRO), total VOCs, total SVOCs, total RCRA metals, total beryllium, PCBs, and gamma spectroscopy. Except for TPH-DRO, all other COPCs were detected below their PALs, including VOCs and SVOCs. Concentrations of TPH-DRO exceeding the PAL of 100 mg/kg were detected at both sampling locations (NNSA/NSO, 2004e).

Table 9-1 contains analytical results of all COCs at CAS 01-25-01 that are the basis for the current UR. The sample matrix for all samples is soil.

**Table 9-1  
Sample Results for COCs at CAS 01-25-01  
Used To Establish Current Use Restriction**

Sample Location	Sample ID	Depth (ft bgs)	TPH (DRO)
			PAL 100 mg/kg
A01	322A001	0 - 0.5	2,900 (J)
	322A002	2 - 3	480 (D)
A02	322A003	0 - 0.5	5,900 (J)
	322A004	2 - 3	7,000 (J)
	322A005	2 - 3	6,900 (D)
	322A009	4 - 5	6,700 (D)
	322A010	6 - 7	1,100 (D)
	322A011	9 - 10	140 (D)

bgs = Below ground surface  
DRO = Diesel-range organics  
ft = Foot

mg/kg = Milligrams per kilogram  
PAL = Preliminary action level  
TPH = Total petroleum hydrocarbons

D = A pattern resembling diesel was detected in the samples.  
J = Estimated value

#### **9.4 Basis for Use Restriction Modification**

The revised FALs associated with the TPH contamination were established based on the PALs of hazardous constituents of TPH diesel as described in Section 2.2.2. Hazardous constituents of TPH diesel were not detected in any of the samples at concentrations greater than their respective PALs (NNSA/NSO, 2004e). Therefore, no contaminants are present at this site in concentrations exceeding the revised FALs, and all revised FALs were established at the PAL concentrations.

#### **9.5 Proposed Modification**

Remove the FFACO UR, associated fencing and postings, and inspection and maintenance requirements from this site.

## **10.0 CAU 322, CAS 03-25-03 – Mud Plant AST Diesel Release**

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### **10.1 CAS Description**

Corrective Action Site 03-25-03 is located within the former Mud Plant facility in the former Area 3 Camp. The Mud Plant facility began operation in February 1962 and was used to formulate mud mixtures in support of drilling operations for the UGTA Project. The Mud Plant facility operations ceased in December 1995. An AST containing fuel oil and a fuel dispensing station were located approximately 350 ft west of the Mud Plant. Available records indicated the AST had a capacity of approximately 10,000 gal and was located in a gravel containment pit. Aerial photos indicate the fuel dispensing station was located south of the AST. Information was not available regarding the type of equipment or physical condition of the fuel dispensing station. The AST and fuel station were removed; however, the date of the removal is not available (NNSA/NSO, 2003f).

### **10.2 Current Use Restriction Description**

The future use of any land affected by this UR is restricted from any DOE or Air Force activity that may alter or modify the containment control, as approved by the state and identified in the CAU CR or other CAU documentation, unless appropriate concurrence is obtained in advance. As part of closure activities, fencing was erected along the Mud Plant boundary, connecting with existing fencing surrounding the Mud Plant Pond and Mud Disposal Crater to limit access to the interior of the contaminated area, and six UR signs were installed around the impacted area between the Mud Plant, Mud Plant Pond, and Mud Disposal Crater. Site monitoring requirements for the UR include periodic visual inspections of UR postings and fencing. These are required annually for the first five years, followed by every five years, for a total of 30 years. (NNSA/NSO, 2006b)

### **10.3 Basis for Current Use Restriction**

Samples were analyzed for TPH (DRO and GRO), total VOCs, total SVOCs, total RCRA metals, PCBs, total beryllium, isotopic U, isotopic Pu, Sr-90, and gamma spectroscopy. Except for TPH-DRO, all other COPCs were detected below their PALs, including VOCs and SVOCs. Concentrations of TPH-DRO exceeding the PAL of 100 mg/kg were detected at six sampling locations (NNSA/NSO, 2004e).

Table 10-1 contains analytical results of all COCs at CAS 03-25-03 that are the basis for the current UR. The sample matrix for all samples is soil.

**Table 10-1**  
**Sample Results for COCs at CAS 03-25-03**  
**Used To Establish Current Use Restriction**

Sample Location	Area	Sample ID	Depth (ft bgs)	TPH (DRO)
				PAL 100 mg/kg
B01	A	322B038	2 - 3	140 (D,H,M)
B04		322B010	0 - 0.5	370 (H,M)
B08	B	322B053	2 - 3	170 (H,M)
B14		322B043	14 - 15	300 (H,Y)
B15		322B020	0 - 0.5	150 (H,M)
		322B044	2 - 3	4,000 (Y)
B17		322B062	2 - 3	1,500 (H,M)

bgs = Below ground surface  
DRO = Diesel-range organics  
ft = Foot  
ID = Identification

mg/kg = Milligrams per kilogram  
PAL = Preliminary action level  
TPH = Total petroleum hydrocarbons

D = A pattern resembling diesel was detected in the samples.  
H = The fuel pattern was in the heavier end of the retention time window for the analyte of interest.  
M = A pattern resembling motor oil was detected.  
Y = Multiplex chromatogram does not match target analytes.

#### **10.4 Basis for Use Restriction Modification**

The revised FALs associated with the TPH contamination were established based on the PALs of hazardous constituents of TPH diesel described in Section 2.2.2. Hazardous constituents of TPH diesel were not detected in any of the samples at concentrations greater than their respective PALs (NNSA/NSO, 2004e). Therefore, no contaminants are present at this site in concentrations exceeding the revised FALs, and all revised FALs were established at the PAL concentrations.

#### **10.5 Proposed Modification**

Remove the FFACO UR, associated fencing and postings, and inspection and maintenance requirements from this site.

## ***References***

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FFACO, see *Federal Facility Agreement and Consent Order*.

*Federal Facility Agreement and Consent Order*. 1996 (as amended). Agreed to by the State of Nevada; U.S. Department of Energy, Environmental Management; U.S. Department of Defense; and U.S. Department of Energy, Legacy Management.

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2003f. *Corrective Action Investigation Plan for Corrective Action Unit 322: Areas 1 and 3 Release Sites and Injection Wells, Nevada Test Site, Nevada*, Rev. 0, DOE/NV--901. July. Las Vegas, NV.

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2006b. *Closure Report for Corrective Action Unit 322: Areas 1 and 3 Release Sites and Injection Wells, Nevada Test Site, Nevada*, Rev. 0, DOE/NV--1134. June. Las Vegas, NV.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office.  
2006c. *Industrial Sites Project Establishment of Final Action Levels*, Rev. 0, DOE/NV--1107. Las Vegas, NV.

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