RECORD OF TECHNICAL CHANGE

Technical Change No. DOE/NV-1065 ROTC-1

Page 1 of 1

Activity Name Industrial Sites

Date 12/11/2013

The following technical changes (including justification) are requested by:

Cathleen Birney
(Name)

N-I CAU Lead
(Title)

Description of Change:

Downgrade the FFACO UR at CAU 554, CAS 23-02-08, USTs 23-115-1,2,3/Spill 530-90-002 to an Administrative UR.

Justification:

Since this FFACO UR was established, practices and procedures relating to the implementation of risk-based corrective actions (RBCA) have changed. Therefore, this UR was re-evaluated against the current RBCA criteria as defined in the *Soils Risk-Based Corrective Action Evaluation Process*. This re-evaluation assumed that the future land use for this CAS is Industrial Area (IA).

Samples from CAS 23-02-08 contained contamination exceeding the PAL. The sums of the carcinogenic ratios for all but one sample collected from this CAS were less than 1.0 and require no further corrective action. The sum of the carcinogenic ratios for one sample collected from this CAS was slightly greater than 1.0, indicating the need for corrective action. However, this sample was collected from a depth of 380 ft bgs. The risk associated with this contamination is limited to a receptor being exposed to media 380 ft bgs. This could only occur through significant drilling activity. As this does not present a risk to any potential receptor under current or foreseeable land use at this site, and as such an activity would be restricted under an Administrative UR, the downgrade of the FFACO UR to an Administrative UR will provide the protection to inadvertent exposure to this deep subsurface contamination. See attached "Recommendation to Downgrade Use Restriction" for detailed information.

The task time will be unchanged by approximately 0 days.

Applicable Activity-Specific Document(s):

Corrective Action Decision Document/Closure Report for Corrective Action Unit 554: Area 23 Release Site, Nevada Test Site, Nevada

Approved By: /s/ Tiffany A. Lantow Date 12/11/2013
Activity Lead

/s/ Robert F. Boehlecke Date 12/12/13
EM Operations Manager

/s/ Jeff MacDougall Date 12/17/13
NDEP

Nevada
Environmental
Management
Operations Activity

DOE/NV--1509-Rev.1

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

Controlled Copy No.: _
Revision No.: 1

October 2013

UNCLASSIFIED

/s/ Joseph P. Johnston, N-I CO 10/08/2013

Approved for public release; further dissemination unlimited.

U.S. Department of Energy
National Nuclear Security Administration
Nevada Field Office

UNCLASSIFIED

UNCONTROLLED When Printed

Available for sale to the public from:

U.S. Department of Commerce
National Technical Information Service
5301 Shawnee Road
Alexandria, VA 22312
Telephone: 800.553.6847
Fax: 703.605.6900
E-mail: orders@ntis.gov
Online Ordering: <http://www.ntis.gov/help/ordermethods.aspx>

Available electronically at <http://www.osti.gov/bridge>

Available for a processing fee to U.S. Department of Energy and its contractors,
in paper, from:

U.S. Department of Energy
Office of Scientific and Technical Information
P.O. Box 62
Oak Ridge, TN 37831-0062
Phone: 865.576.8401
Fax: 865.576.5728
Email: reports@adonis.osti.gov

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

**RECOMMENDATIONS AND JUSTIFICATIONS
FOR MODIFICATIONS TO DOWNGRADE
USE RESTRICTIONS ESTABLISHED
UNDER THE U.S. DEPARTMENT OF ENERGY,
NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA FIELD OFFICE
*FEDERAL FACILITY AGREEMENT
AND CONSENT ORDER***

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

Controlled Copy No.: _

Revision No.: 1

October 2013

Approved for public release; further dissemination unlimited.

**RECOMMENDATIONS AND JUSTIFICATIONS
FOR MODIFICATIONS TO DOWNGRADE USE RESTRICTIONS ESTABLISHED
UNDER THE U.S. DEPARTMENT OF ENERGY,
NATIONAL NUCLEAR SECURITY ADMINISTRATION NEVADA FIELD OFFICE
*FEDERAL FACILITY AGREEMENT AND CONSENT ORDER***

Approved by: /s/ Tiffany A. Lantow

Tiffany A. Lantow
Industrial Sites Activity Lead

Date: 10/9/2013

Approved by: /s/ Robert F. Boehlecke

Robert F. Boehlecke
Environmental Management Operations Manager

Date: 10/9/2013

13.0 CAU 554, CAS 23-02-08 – USTs 23-115-1,2,3/ Spill 530-90-002

13.1 CAS Description

CAS 23-02-08 is located in Area 23 of the NNSS and comprises one or more fuel oil release(s) from former USTs to the ground surface and/or surrounding shallow subsurface soils. The USTs were located off the northwest corner of Building 115, which was the Mercury Steam Plant. Two of the three former USTs were 15,000-gal capacity tanks and were installed in 1951 with the construction of the Steam Plant. These tanks were removed in December 1977 and replaced with similar sized tanks in January 1978. The third tank was a 10,000-gal capacity and was installed in 1965 during construction of the western addition to the Steam Plant. In 1983, all tank operations were discontinued at Building 115 when the Steam Plant was taken out of operation. All three tanks and associated piping were removed in December 1989, and the excavation was backfilled in March 1990. Building 115 and the surrounding components were demolished and removed in 2003 (NNSA/NSO, 2004e). The building pad and CAS 23-02-08 are located on a lot between Tumbler Avenue to the north and Ranger Avenue to the south, and are bordered by a pedestrian sidewalk and Snapper Road to the west (NNSA/NSO, 2005b).

13.2 Current UR Description

The future use of any land related to this CAU is restricted from any DOE or USAF activity that may alter or modify the containment control as approved by the State of Nevada and identified in the CAU CR or other CAU documentation unless appropriate concurrence is obtained in advance. The UR was put into place as a BMP and is for unauthorized intrusive activities below 10 ft. Six UR signs were placed around the boundary of the CAS; no fencing is required per the UR paperwork. Site monitoring requirements for the UR include annual visual inspections of UR signs (NNSA/NSO, 2005b).

13.3 Basis for Current UR

Soil samples from 10 boreholes were collected at CAS 23-02-08 and were submitted for laboratory analysis. Most environmental samples were analyzed for VOCs, SVOCs, RCRA metals, TPH-DRO,

TPH-GRO, PCBs, and gamma spectroscopy. Certain environmental samples were also analyzed for a modified suite consisting of VOCs, SVOCs, and TPH-DRO.

The soil samples results for TPH-DRO and TPH-GRO exceeded the NDEP action level of 100 mg/kg. The concentrations of the VOC trichloroethene (TCE), and the SVOCs BAP and dibenzo(a,h)anthracene (DBA) exceeded the PALs. There were no other contaminants with soil concentrations greater than the PALs. A Tier 2 evaluation was completed for BAP, DBA, TCE, and hazardous constituents of diesel, and Tier 2 site-specific FALs were established. The concentrations of BAP, DBA, TCE, and the hazardous constituents of diesel were below the FALs; therefore, these analytes were not considered COCs at this CAS.

Although TPH-GRO was detected in two samples, based on inspection of the sample chromatograms, it appeared that TPH-GRO was not present in the samples. The TPH-DRO concentrations in these samples were high enough to cause the earlier eluting components of diesel to be quantitated at TPH-GRO. Diesel has earlier eluting components and at high concentrations can give a "false positive" for TPH-GRO. Therefore, TPH-GRO was not considered a COC at this CAS (NNSA/NSO, 2005b).

Table 13-1 contains analytical results of all COCs at CAS 23-02-08 that are the basis for the current UR. The sample matrix for all samples is soil.

13.4 Basis for UR Modification

Samples from CAS 23-02-08 contained contamination exceeding the PAL. The sums of the carcinogenic ratios for all but one sample collected from this CAS were less than 1.0 and require no further corrective action. The sum of the carcinogenic ratios for one sample collected from this CAS was slightly greater than 1.0, indicating the need for corrective action. However, this sample was collected from a depth of 380 ft bgs. The risk associated with this contamination is limited to a receptor being exposed to media 380 ft bgs. This could only occur through significant drilling activity. As this does not present a risk to any potential receptor under current or foreseeable land use at this site, and as such an activity would be restricted under an Administrative UR, the downgrade of the FFACO UR to an Administrative UR will provide the protection to inadvertent exposure to this deep subsurface contamination.

Table 13-1
Sample Results for COCs at CAS 23-02-08 Used To Establish Current UR

Sample Location ^a	Sample ID	Sample Depth (ft bgs)	TPH-GRO	TPH-DRO
			PAL 100 mg/kg	PAL 100 mg/kg
A01	554A002	14.0 - 15.0	--	5,800 (J) ^b
	554A003	14.0 - 15.0	--	6,100 (J) ^b
	554A005	150.0 - 151.0	--	16,000 (J) ^b
	554A009	198.0 - 199.0	--	8,100 (J) ^b
	554A011	240.0 - 241.0	--	16,000 (J) ^b
	554A012	290.0 - 291.0	--	7,200 (J) ^b
	554A013	310.0 - 311.0	120	7,000 (J) ^b
	554A014	340.0 - 342.0	240	9,300 (J) ^b
	554A015	380.0 - 382.0	--	26,000 (J) ^b
A04	554A021	99.0 - 100.0	--	16,000 (J) ^b
	554A04109	108.0 - 109.0	--	23,000 (J) ^b
	554A04149	148.0 - 149.0	--	6,300
	554A04199	198.0 - 199.0	--	3,200 (J) ^b
	554A04200	198.0 - 199.0	--	3,800 (J) ^b
	554A04249	248.0 - 249.0	--	2,400
A07	554A07301	300.0 - 301.0	--	150

^aSample location indicates different boreholes.

^bQualifier added to laboratory data; record accepted. Surrogate diluted out.

J = Estimated value.

-- = No detects above original action levels.

13.5 Proposed Modification

Although one sample indicates the need for corrective action, this sample was collected at 380 ft bgs and does not present a risk to any potential receptor under current or foreseeable land use at this site. An Administrative UR will protect site workers from inadvertent exposure to deep subsurface contamination and will prevent future, more intensive use of the area. Therefore, remove the FFACO UR and associated postings; discontinue the annual inspections and maintenance requirements; and change to an Administrative UR. These modifications will not affect or modify any non-FFACO requirements at this site.

References

NNSA/NSO, see U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2004e. *Corrective Action Investigation Plan for Corrective Action Unit 554: Area 23 Release Site, Nevada Test Site, Nevada*, Rev. 0, DOE/NV--1010. Las Vegas, NV.

U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2005b. *Corrective Action Decision Document/Closure Report for Corrective Action Unit 554: Area 23 Release Site, Nevada Test Site, Nevada*, Rev. 0, DOE/NV--1065. Las Vegas, NV.

Use Restriction Information

CAU Number/Description: CAU 554/Area 23 Release Site

Applicable CAS Number/Description: CAS 23-02-08/USTs 23-115-1,2,3/Spill 530-90-002

Contact (DOE AL/Activity): Tiffany Lantow/Industrial Sites - EM

FFACO Use Restriction Physical Description:

Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Points	Northing	Easting
N/A		

Depth:

Survey Source (GPS, GIS, etc):

Basis for FFACO UR(s):

Summary Statement: _____

Contaminants Table:

Maximum Concentration of Contaminants for CAU XXX CAS xx-xx-xx, Title			
Constituent	Maximum Concentration	Action Level	Units

Site Controls:

Use Restriction Information

Administrative Use Restriction Physical Description*:

Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Points	Northing	Easting
Southeast Corner	4,057,792	589,799
Southwest Corner	4,057,792	589,745
Northwest Corner	4,057,823	589,745
Northeast Corner	4,057,823	589,799

Depth: Greater than 10 ft bgs

Survey Source (GPS, GIS, etc): GPS

*Coordinates for the Administrative Use Restriction exclude the area defined by the FFACO Use Restriction coordinates.

Basis for Administrative UR(s):

Summary Statement: This administrative UR is to protect site workers from inadvertent exposure to deep subsurface contamination. Samples from CAS 23-02-08 contained contamination exceeding the PAL. The sums of the carcinogenic ratios for all but one sample collected from this CAS were less than 1.0 and require no further corrective action. The sum of the carcinogenic ratios for one sample collected from this CAS was slightly greater than 1.0, indicating the need for corrective action. However, this sample was collected from a depth of 380 ft bgs. The risk associated with this contamination is limited to a receptor being exposed to media 380 ft bgs. This could only occur through significant drilling activity. This administrative use restriction will prevent future (more intensive) use of the area. The analytical results and location of all samples collected are presented in the CADD/CR for CAU 554. Additional information is presented in *Recommendations and Justifications for Modifications to Downgrade Use Restrictions Established under the U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office Federal Facility Agreement and Consent Order* document.

Contaminants Table:

Maximum Concentration of Contaminants for CAU 554 CAS 23-02-08, USTs 23-115-1,2,3/Spill 530-90-002			
Constituent	Maximum Concentration	Action Level	Units
TPH	26,000	N/A	mg/kg

Site Controls: This administrative UR area is established at the boundary identified by the coordinates listed above and depicted in the attached figure. No physical site controls are required for this administrative use restriction.

UR Maintenance Requirements (applies to both FFACO and Administrative UR(s) if Administrative UR exists):

Description: This administrative UR is recorded in the FFACO database, NNSA/NFO M&O GIS, and the NNSA/NFO CAU/CAS files. No site controls are required for this administrative UR other than the administrative controls for land use at the NNSS.

Inspection/Maintenance Frequency: N/A

The future use of any land related to this Corrective Action Unit (CAU), as described by the above surveyed location, 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.

Note: Effective upon acceptance of closure documents by NDEP

Page 2 of 3

UNCONTROLLED When Printed

Use Restriction Information

Comments: Personnel are restricted from performing work in this location that would require any use of the area within the UR for activities that would result in a more intensive use of the site than the current land use (i.e., activities consistent with the occasional use exposure scenario). Activities included in the current land use would include short duration activities such as site visits, maintenance of the fence, radiological surveys, short duration radiological training, and retrieval of objects within the use-restricted area. Any activities to be conducted within this area that are not consistent with this defined current land use require the prior notification and approval of the NDEP.

Submitted By: /s/ Tiffany A. Lantow

Date: 12/11/2013

H:\GIS WORK\GW0660 UR Convert\UR Coordinates 23-02-08.mxd - 9/12/2013

Administrative Use Restriction
CAU 554 CAS 23-02-08
USTs 23-115-1,2,3/Spill 530-90-002

Explanation

Administrative Use Restriction Boundary

Coordinate System: NAD 1983 UTM Zone 11N, Meter

UNCONTROLLED When Printed