Nevada
Environmental
Restoration
Project

DOE/NV--1470

Post-Closure Report for Closed
*Resource Conservation and
Recovery Act* Corrective Action
Units, Nevada National Security
Site, Nevada

For Fiscal Year 2011
(October 2010–September 2011)

Controlled Copy No.: _____

Revision: 0

January 2012

Environmental Restoration
Project

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

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**POST-CLOSURE REPORT FOR CLOSED
RESOURCE CONSERVATION AND RECOVERY ACT
CORRECTIVE ACTION UNITS,
NEVADA NATIONAL SECURITY SITE, NEVADA**

**FOR FISCAL YEAR 2011
(OCTOBER 2010–SEPTEMBER 2011)**

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

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NEVADA NATIONAL SECURITY SITE, NEVADA**

**FOR FISCAL YEAR 2011
(OCTOBER 2010–SEPTEMBER 2011)**

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ACRONYMS AND ABBREVIATIONS

CAU	Corrective Action Unit
FFACO	<i>Federal Facility Agreement and Consent Order</i>
ft	foot (feet)
in.	inch(es)
NDEP	Nevada Division of Environmental Protection
SM	subsidence marker
TDR	Time Domain Reflectometry

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EXECUTIVE SUMMARY

This report serves as the combined annual report for post-closure activities for the following closed Corrective Action Units (CAUs):

- CAU 90, Area 2 Bitcutter Containment
- CAU 91, Area 3 U-3fi Injection Well
- CAU 92, Area 6 Decon Pond Facility
- CAU 110, Area 3 WMD U-3ax/bl Crater
- CAU 112, Area 23 Hazardous Waste Trenches

The locations of the sites are shown in Figure 1. This report covers fiscal year 2011 (October 2010–September 2011). The post-closure requirements for these sites are described in *Resource Conservation and Recovery Act* Permit Number NEV HW0101 and summarized in each CAU-specific section in Section 1.0 of this report.

Site inspections are conducted semiannually at CAUs 90 and 91 and quarterly at CAUs 92, 110, and 112. Additional inspections are conducted at CAU 92 if precipitation occurs in excess of 0.50 inches in a 24-hour period. Inspections include an evaluation of the condition of the units and identification of any deficiencies that may compromise the integrity of the units. The condition of covers, fencing, signs, gates, and locks is documented. In addition, soil moisture monitoring and subsidence surveys are conducted at CAU 110. The results of the inspections, summary of maintenance activities, results of vegetations surveys, and analysis of monitoring data are presented in this report.

Copies of the inspection checklists are included as Appendix A. Field notes completed during each inspection are included in Appendix B. Photographs taken during the inspections are included in Appendix C.

It is recommended to continue semiannual inspections at CAUs 90 and 91; quarterly inspections at CAUs 92, 110, and 112; and additional inspections at CAU 92 if precipitation occurs in excess of 0.50 inches in a 24-hour period. At CAU 92, it is recommended to remove the wave barriers, as they have not proven to be necessary to protect the cover. At CAU 110, it is recommended to continue annual vegetation monitoring and soil moisture monitoring, and to reduce the frequency of subsidence surveys from twice per year to once every other year (biennially).

FIGURE ES-1
LOCATIONS OF CLOSED RESOURCE CONSERVATION
AND RECOVERY ACT CORRECTIVE ACTION SITES

1.0 SUMMARY OF INSPECTIONS, REPAIRS, AND MAINTENANCE

1.1 CORRECTIVE ACTION UNIT 90, AREA 2 BITCUTTER CONTAINMENT

1.1.1 Permit Requirements

Semiannual inspections are required at Corrective Action Unit (CAU) 90 to evaluate the condition of the unit and identify deficiencies that may compromise the unit's integrity. Photographs are taken, and the results of the inspection are documented on a checklist. Deficiencies other than general housekeeping issues are reported to the Nevada Division of Environmental Protection (NDEP) and remedied within 60 days of discovery.

1.1.2 Inspection, Repair, and Maintenance Activities

Semiannual inspections were performed on December 7, 2010, and June 29, 2011. During the December inspection, the signs and fencing were in good condition, and there was no evidence of settling, cracking, or animal burrowing. No issues were identified, and no maintenance or repairs were required. During the June inspection, the signs and fencing were in good condition, and there was no evidence of settling or cracking. Small animal burrows were present, and the burrows were backfilled on July 27, 2011. No other issues were identified, and no additional maintenance or repairs were required.

1.2 CORRECTIVE ACTION UNIT 91, AREA 3 U-3FI INJECTION WELL

1.2.1 Permit Requirements

Semiannual inspections are required at CAU 91 to evaluate the condition of the unit and identify deficiencies that may compromise the unit's integrity. Photographs are taken, and the results of the inspection are documented on a checklist. The permit does not specify a time limit for repairs or maintenance at CAU 91.

1.2.2 Inspection, Repair, and Maintenance Activities

Vegetation removal that was recommended during the September 2010 inspection was completed on November 2, 2010. Semiannual inspections were performed on March 9 and September 13, 2011. During the March inspection, the signs and fencing were in good condition, and there was no evidence of settling, animal burrowing, or vegetation. No issues were identified, and no maintenance or repairs were required. During the September inspection, signs and fencing were in good condition, and there was no evidence of settling. Vegetation and small animal burrows were present on the cover. Vegetation removal and backfilling of burrows were completed within 60 days and will be reported in the next annual report. No other issues were identified, and no additional maintenance or repairs were required.

1.3 CORRECTIVE ACTION UNIT 92, AREA 6 DECON POND FACILITY

1.3.1 Permit Requirements

Inspections are required quarterly at CAU 92 and in the event that precipitation occurs in excess of 0.50 inches (in.) in a 24-hour period. Inspections include an evaluation of the cover and identification of deficiencies that may compromise the unit's integrity. Photographs are taken,

and the results of the inspection are documented on a checklist. The checklist documents the reason for the inspection (i.e., quarterly or excess precipitation) and any changes in the condition of the cover or fenced area, including, but not limited to, trash or debris within the fenced area, erosion of the cover, vegetation growing on the cover, and animal burrows or nesting activity. The condition of the fencing, wave barrier (fiberglass slats laced through the bottom of the chain-link fencing), use restriction warning signs, entrance gate, and lock is also documented. Small cracks or settling imperfections (less than 2 in. deep) on the cover are documented, and repairs are scheduled on an annual basis. Larger disruptions of the cover are immediately reported to NDEP and remedied within 60 days of discovery.

1.3.2 Inspection, Repair, and Maintenance Activities

On October 17–18, 2010, 0.51 in. of precipitation was recorded. An inspection was conducted on October 19, 2010. Standing water was not present; the signs, fencing, and wave barriers were in good condition; and there was no evidence of settling or cracking. Vegetation was present on the cover, and vegetation removal was completed on November 1, 2010. No other issues were identified, and no additional maintenance or repairs were required.

Quarterly inspections were performed on December 7, 2010, and on March 9, June 30, and September 13, 2011. During the December quarterly inspection, the signs, fencing, and wave barriers were in good condition, and there was no evidence of settling, cracking, or vegetation. One small area of standing water was present at the foot of the northeast edge of the cover. No issues were identified, and no maintenance or repairs were required.

On December 17–22, 2010, 3.38 in. of precipitation were recorded. An inspection was conducted on December 23, 2010. Standing water was present outside the cover. The signs, fencing, and wave barriers were in good condition, and there was no evidence of settling, cracking, or vegetation. No issues were identified, and no maintenance or repairs were required.

During the March quarterly inspection, the signs, fencing, and wave barriers were in good condition, and there was no evidence of settling, cracking, or vegetation. No issues were identified, and no maintenance or repairs were required.

On May 8–9, 2011, 0.64 in. of precipitation was recorded. An inspection was conducted on May 10, 2011. Standing water was not present, the signs were in good condition, and there was no evidence of settling, cracking, or vegetation. A portion of the northwest side of the fence had come loose, and fence repair was completed on May 24, 2011. No other issues were identified, and no additional maintenance or repairs were required.

During the June quarterly inspection, the signs, fencing, and wave barriers were in good condition, and there was no evidence of settling or cracking. Vegetation was present on the cover, and vegetation removal and herbicide application was completed on July 18, 2011. No other issues were identified, and no additional maintenance or repairs were required.

During the September quarterly inspection, the fencing was in good condition, and there was no evidence of settling or cracking. Two signs were faded, the wave barriers along the west and northeast sides of the fence were damaged, and vegetation was present on the cover. Sign replacement and vegetation removal activities were completed within 60 days and will be reported in the next annual report. It is not recommended to repair the wave barriers, as they do not provide additional protection of the cover and are not cost-effective to maintain. No other issues were identified, and no additional maintenance or repairs were required.

1.4 CORRECTIVE ACTION UNIT 110, AREA 3 WMD U-3AX/BL CRATER

1.4.1 Permit Requirements

Quarterly inspections are required at CAU 110 to verify that the cover is intact. Photographs are taken, and the results of the inspection are documented on a checklist. The perimeter of the site is walked by the inspector, and the condition of the fencing and chicken wire, use restriction warning signs, and entrance gate and lock is documented. In addition, the seven subsidence markers (SMs) are inspected, and any changes in the condition of the cover, including, but not limited to, trash or debris within the fenced area, erosion of the cover, and animal burrows or nesting activity, are documented. Non-critical cracks or settling imperfections (equal to or less than 6 in. deep) on the cover are documented, and repairs are scheduled on an annual basis. Cracks or settling imperfections greater than 6 in. deep that extend 3 feet (ft) or more are reported to NDEP and repaired within 60 days of discovery.

1.4.2 Inspection, Repair, and Maintenance Activities

Radiological warning sign maintenance recommended after the September 2010 inspection was completed on October 21, 2010. Quarterly inspections were performed on December 7, 2010, and on March 9, June 30, and September 13, 2011. During the December inspection, the signs and fencing were in good condition, and there was no evidence of settling, cracking, or significant animal burrowing. The vegetation appeared to be in good condition. A section of chicken wire along the bottom of the fence was down, and the chicken wire was repaired on January 25, 2011. No other issues were identified, and no additional maintenance or repairs were required.

During an informal site assessment of the new vegetation that was planted on the east portion of the cover on January 18, 2011, two previously repaired subsidence areas were observed to have subsided. One area was approximately 6 ft by 2 ft by 6 in. deep, and the other was approximately 4 ft by 3 ft by 1 ft deep. Repairs were completed on February 2, 2011.

During the March inspection, the signs and fencing were in good condition, and there was no evidence of settling, cracking, or significant animal burrowing. The vegetation appeared to be in good condition. No issues were identified, and no maintenance or repairs were required.

During the June inspection, the fencing was in good condition, and there was no evidence of settling, cracking, or significant animal burrowing. The vegetation appeared to be in good condition. Two use restriction signs were faded, and the signs were replaced on July 20, 2011. No other issues were identified, and no additional maintenance or repairs were required.

During the September inspection, the signs and fencing were in good condition, and there was no evidence of settling or cracking. The vegetation appeared to be in good condition. Small animal burrows were present on the cover, and chicken wire fence around repaired subsidence areas was loose. Backfilling of burrows and fence repair were completed within 60 days and will be reported in the next annual report. No other issues were identified, and no additional maintenance or repairs were required.

1.5 CORRECTIVE ACTION UNIT 112, AREA 23 HAZARDOUS WASTE TRENCHES

1.5.1 Permit Requirements

Quarterly inspections are required at CAU 112 to evaluate the condition of the unit and identify deficiencies that may compromise the unit's integrity. The results of the inspection are documented on a checklist. The permit does not specify a time limit for repairs or maintenance at CAU 112.

1.5.2 Inspection, Repair, and Maintenance Activities

Quarterly inspections were performed on December 7, 2010, and on March 9, June 29, and September 13, 2011. During the December inspection, the signs and fencing were in good condition, and there was no evidence of settling, cracking, vegetation, or animal burrowing. No issues were identified, and no maintenance or repairs were required.

During the March inspection, the signs and fencing were in good condition, and there was no evidence of settling, cracking, vegetation, or animal burrowing. No issues were identified, and no maintenance or repairs were required.

During the June inspection, the signs and fencing were in good condition, and there was no evidence of settling, cracking, or animal burrowing. Vegetation was present on the cover, and vegetation removal and herbicide application was completed on July 18, 2011. No other issues were identified, and no additional maintenance or repairs were required.

During the September inspection, the signs and fencing were in good condition, and there was no evidence of settling, cracking, or animal burrowing. A minor amount of vegetation was present that did not require follow-up actions. A small amount of debris was present on the cover. Removal and disposal of debris was completed within 60 days and will be reported in the next annual report. No other issues were identified, and no additional maintenance or repairs were required.

2.0 CORRECTIVE ACTION UNIT 110 SUBSIDENCE AND VEGETATION SURVEY RESULTS

2.1 SUBSIDENCE SURVEY

Seven SMs are installed on the cover of CAU 110 to determine if subsidence of the cover is occurring. The initial baseline subsidence survey was conducted on December 14, 2000. Subsequent surveys are conducted twice per year and are compared to the December 2000 baseline survey results. Subsidence surveys were completed on March 3 and September 15, 2011.

The subsidence survey results are tabulated in Table 1. No significant subsidence was observed. SM #5 shows the greatest decrease in elevation (-0.13 ft) compared to the baseline survey in 2000. This indicates that only minor settling is occurring, especially at SM #5. However, it does not warrant corrective action.

Because significant subsidence has not been observed on the cover based on subsidence surveys since surveys began, it is recommended to reduce the frequency of the surveys from twice per year to once every other year (biennially). The localized subsidence that occurs on the cover will continue to be monitored during quarterly inspections.

2.2 VEGETATION SURVEY

The CAU 110 cover was initially planted with native seed in December 2000. Surveys have been conducted annually to assess the success of the revegetation effort. The vegetation survey was completed on May 10, 2011. The plant community on the cover appears to be stable and comparable to surrounding, undisturbed native plant communities. There have been no significant changes in plant cover, density of perennial plants, or species richness of perennial species over the last 5 years. Density and species richness estimates exceed the standards for success. The only concern is perennial grasses, which have not persisted through several years of low precipitation. Invasive weeds are becoming more common on the cover. Cheatgrass was more common this year than in previous years. The disturbed areas where subsidence repairs were performed on the eastern edge of the cover are relatively small and represent a small percentage of the cover. Re-establishment of native species to these areas may take several years to fully recover plant cover and density similar to the rest of the cover.

TABLE 1. CORRECTIVE ACTION UNIT 110 SUBSIDENCE SURVEY RESULTS

DATE	SM #1	SM #2	SM #3	SM #4	SM #5	SM #6	SM #7
	Elevation at Top of Subsidence Marker ¹						
	Subsidence Since December 2000 Baseline Survey (ft)						
December 2000 Baseline	4,021.84	4,021.28	4,019.83	4,020.99	4,021.87	4,019.25	4,020.52
	—	—	—	—	—	—	—
July 2001	4,021.83	4,021.28	4,019.83	4,020.98	4,021.86	4,019.24	4,020.51
	-0.01	0.00	0.00	-0.01	-0.01	-0.01	-0.01
January 2002	4,021.84	4,021.28	4,019.83	4,020.98	4,021.86	4,019.24	4,020.51
	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01
September 2002	4,021.83	4,021.27	4,019.83	4,020.98	4,021.86	4,019.24	4,020.50
	-0.01	-0.01	0.00	-0.01	-0.01	-0.01	-0.02
January 2003	4,021.83	4,021.27	4,019.83	4,020.98	4,021.86	4,019.24	4,020.50
	-0.01	-0.01	0.00	-0.01	-0.01	-0.01	-0.02
July 2003	4,021.83	4,021.27	4,019.83	4,020.97	4,021.85	4,019.24	4,020.50
	-0.01	-0.01	0.00	-0.02	-0.02	-0.01	-0.02
March 2004	4,021.82	4,021.26	4,019.82	4,020.97	4,021.83	4,019.22	4,020.49
	-0.02	-0.02	-0.01	-0.02	-0.04	-0.03	-0.03
September 2004	4,021.82	4,021.26	4,019.82	4,020.96	4,021.83	4,019.23	4,020.49
	-0.02	-0.02	-0.01	-0.03	-0.04	-0.02	-0.03
March 2005	4,021.82	4,021.26	4,019.82	4,020.96	4,021.82	4,019.22	4,020.49
	-0.02	-0.02	-0.01	-0.03	-0.05	-0.03	-0.03
September 2005	4,021.82	4,021.26	4,019.82	4,020.97	4,021.82	4,019.23	4,020.49
	-0.02	-0.02	-0.01	-0.02	-0.05	-0.02	-0.03
March 2006	4,021.82	4,021.26	4,019.82	4,020.96	4,021.82	4,019.23	4,020.49
	-0.02	-0.02	-0.01	-0.03	-0.05	-0.02	-0.03
September 2006	4,021.82	4,021.25	4,019.82	4,020.96	4,021.81	4,019.22	4,020.49
	-0.02	-0.03	-0.01	-0.03	-0.06	-0.03	-0.03
March 2007	4,021.82	4,021.25	4,019.82	4,020.96	4,021.80	4,019.22	4,020.48
	-0.02	-0.03	-0.01	-0.03	-0.07	-0.03	-0.04
September 2007	4,021.81	4,021.25	4,019.81	4,020.96	4,021.79	4,019.22	4,020.49
	-0.03	-0.03	-0.02	-0.03	-0.08	-0.03	-0.03

TABLE 1. CORRECTIVE ACTION UNIT 110 SUBSIDENCE SURVEY RESULTS, CONTINUED

DATE	SM #1	SM #2	SM #3	SM #4	SM #5	SM #6	SM #7
	Elevation at Top of Subsidence Marker ¹						
	Subsidence Since December 2000 Baseline Survey (ft)						
March 2008	4,021.81	4,021.25	4,019.81	4,020.95	4,021.79	4,019.22	4,020.48
	-0.03	-0.03	-0.02	-0.04	-0.08	-0.03	-0.04
September 2008	4,021.81	4,021.25	4,019.81	4,020.95	4,021.78	4,019.21	4,020.48
	-0.03	-0.03	-0.02	-0.04	-0.09	-0.04	-0.04
March 2009	4,021.81	4,021.24	4,019.81	4,020.95	4,021.78	4,019.21	4,020.48
	-0.03	-0.04	-0.02	-0.04	-0.09	-0.04	-0.04
September 2009	4,021.81	4,021.24	4,019.80	4,020.95	4,021.77	4,019.22	4,020.48
	-0.03	-0.04	-0.03	-0.04	-0.10	-0.03	-0.04
March 2010	4,021.81	4,021.24	4,019.80	4,020.95	4,021.77	4,019.21	4,020.48
	-0.03	-0.04	-0.03	-0.04	-0.10	-0.04	-0.04
September 2010	4,021.81	4,021.24	4,019.80	4,020.95	4,021.77	4,019.21	4,020.48
	-0.03	-0.04	-0.03	-0.04	-0.10	-0.04	-0.04
March 2011	4,021.79	4,021.22	4,019.79	4,020.93	4,021.75	4,019.20	4,020.46
	-0.05	-0.06	-0.04	-0.06	-0.12	-0.05	-0.06
September 2011	4,021.79	4,021.22	4,019.79	4,020.93	4,021.74	4,019.19	4,020.46
	-0.05	-0.06	-0.04	-0.06	-0.13	-0.06	-0.06

¹ Elevations based on North American Vertical Datum of 1929 in ft.

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3.0 CORRECTIVE ACTION UNIT 110 SOIL MOISTURE MONITORING RESULTS

The CAU 110 cover is designed to prevent infiltration into the disposal unit. The cover performance is monitored using Time Domain Reflectometry (TDR) soil water content sensors buried within the waste cover. The TDR probes are buried at depths of 1 to 8 ft below ground surface at 1 ft intervals. The TDR probes are installed at a distance of 165 ft from the edge of the cover. Arrays of eight probes are positioned at four locations across the cover. Figure 2 illustrates the locations of TDR probes on the cover. Moisture content data from the TDR probes are recorded on a daily basis and stored on a data logger. The data are transmitted via radio frequency and downloaded on a quarterly basis.

Precipitation data were collected from meteorological station Buster Jangle Y, located approximately 3 miles northwest of CAU 110. The precipitation data are presented in Figure 3. Graphs of the TDR-derived soil moisture content profiles, combined with the daily precipitation values, are presented in Figures 4 through 7.

Soil moisture results obtained to date indicate that the CAU 110 cover is functioning as designed. Shallow soil moisture content is variable and dependent on precipitation events and the ability of shallow root systems and evapotranspiration to remove moisture from the soil. The ability for these systems to remove moisture can be locally inhibited if animal burrowing and grazing on plants affects the root systems; therefore, small mammals are trapped and relocated from the cover to limit this damage.

Soil moisture contents for the TDR nests at depth are generally between 9 and 15 percent volumetric moisture content, depending on the location of the nest. Some locations show greater annual variability in moisture content; however, each location appears to have equilibrated to a consistent state for that location.

In the post-closure report for fiscal year 2009, the following compliance criterion was proposed and accepted by NDEP:

- The averaged water content of the three deepest TDR probes (6 ft, 7 ft, and 8 ft) is greater than 32 percent volumetric moisture content for a continuous 6-month period.

Using conservative assumptions for the soil properties, 32 percent volumetric moisture content equates to 80 percent saturation of the soil. If the average volumetric moisture content of the three deepest TDR probes (6 ft, 7 ft, and 8 ft) exceeds 32 percent for a continuous 6-month period, the compliance criterion has been exceeded. If this occurs, NDEP will be notified, and a path forward will be proposed.

The action level is illustrated in Figures 4 through 7. The action level was not exceeded.

FIGURE 1
TIME DOMAIN REFLECTOMETRY LOCATIONS

FIGURE 2
PRECIPITATION DATA FOR METEOROLOGICAL
STATION BUSTER JANGLE Y

FIGURE 3
East TDR NEST A SOIL MOISTURE CONTENT PROFILE

FIGURE 4
East TDR NEST B SOIL MOISTURE CONTENT PROFILE

FIGURE 5
WEST TDR NEST A SOIL MOISTURE CONTENT PROFILE

FIGURE 6
WEST TDR NEST B SOIL MOISTURE CONTENT PROFILE

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4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 CORRECTIVE ACTION UNIT 90, AREA 2 BITCUTTER CONTAINMENT

Semiannual inspections were performed on December 7, 2010, and June 29, 2011. It is recommended to continue semiannual inspections.

4.2 CORRECTIVE ACTION UNIT 91, AREA 3 U-3FI INJECTION WELL

Semiannual inspections were performed on March 9 and September 13, 2011. During the last inspection, vegetation and small animal burrows were present on the cover. Vegetation removal and backfilling of burrows were completed within 60 days and will be reported in the next annual report. No additional maintenance or repairs were required. It is recommended to continue semiannual inspections.

4.3 CORRECTIVE ACTION UNIT 92, AREA 6 DECON POND FACILITY

Quarterly inspections were performed on December 7, 2010, and on March 9, June 30, and September 13, 2011. Inspections were performed on October 19 and December 23, 2010, and on May 10, 2011, after precipitation events in excess of 0.50 in. During the last inspection, two signs were faded, the wave barriers were damaged, and vegetation was present on the cover. Sign replacement and vegetation removal activities were completed within 60 days and will be reported in the next annual report. No additional maintenance or repairs were required.

It is recommended to continue quarterly inspections. In addition, it is recommended to remove the wave barriers, as they have not proven to be necessary to protect the cover. According to the Closure Report for CAU 92, the wave barriers were installed “to mitigate wave action on the cover should Yucca Playa become submerged.” Since monitoring began in 1999, standing water has never been observed on the cover, and wave action has never been observed on Yucca Playa. After heavy rain events, standing water was in some instances observed inside the fenced area, but has never been observed on the cover itself. In addition, the wave barriers require repair due to wind damage on an average of once a year, and some portions of the wave barrier currently require complete replacement due to their poor condition. Therefore, it is recommended to remove the wave barriers, as they do not provide additional protection and are not cost-effective to maintain.

4.4 CORRECTIVE ACTION UNIT 110, AREA 3 WMD U-3AX/BL CRATER

Quarterly inspections were performed on December 7, 2010, and on March 9, June 30, and September 13, 2011. During the last inspection, small animal burrows were present on the cover, and chicken wire fence around repaired subsidence areas was loose. Backfilling of burrows and fence repair were completed within 60 days and will be reported in the next annual report. No additional maintenance or repairs were required.

Subsidence survey results indicate that no significant subsidence of the cover is occurring. Since 2000, the greatest subsidence at one location has been 0.13 ft., which shows that only minor settling has occurred since closure of the site. Soil moisture results obtained to date indicate that the cover is functioning as designed, and the action level was not exceeded.

It is recommended to continue quarterly inspections, annual vegetation monitoring, and soil moisture monitoring. It is recommended to reduce the frequency of subsidence surveys from twice per year to once every other year (biennially).

4.5 CORRECTIVE ACTION UNIT 112, AREA 23 HAZARDOUS WASTE TRENCHES

Quarterly inspections were performed on December 7, 2010, and on March 9, June 29, and September 13, 2011. During the last inspection, a small amount of debris was present on the cover. Removal and disposal of debris was completed within 60 days and will be reported in the next annual report. No additional maintenance or repairs were required. It is recommended to continue quarterly inspections.

APPENDIX A

INSPECTION CHECKLISTS

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CORRECTIVE ACTION UNIT 90 INSPECTION CHECKLISTS

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POST-CLOSURE INSPECTION CHECKLIST

CAU 90: AREA 2 BITCUTTER CONTAINMENT - CAS 02-20-01: Bitcutter/PS Inj. Wells (3) (RCRA)
CAS 02-20-03: Wastewater Pit

Inspection Date and Time: 12/7/10 09:55

Reason for Inspection: Semi-Annual

Date of Last Post-Closure Inspection: 6/28/10

Reason for Last Post-Closure Inspection: Semi-Annual

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn Richards Title: TMS Manager

Organization: Environmental Restoration

Assistant Inspector: Dudley Ennis Title: Sr Scientist

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 90 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

	YES	NO	EXPLANATION (required if shaded box is checked)
1. Has the Post-Closure Permit been reviewed?	☒	☐	
2. Has the Post-Closure Permit application been reviewed?	☒	☐	
3. Has the Post-Closure Plan been reviewed?	☒	☐	
4. Have the site as-built plans and site base map been reviewed?	☒	☐	
5. Have the previous inspection reports been reviewed?	☒	☐	
a. Were anomalies or trends detected on previous inspections?	☐	☒	
b. Was maintenance performed?	☐	☒	
6. Have the site maintenance and repair records been reviewed?	☒	☐	
a. If so, has site repair resulted in a change from as-built conditions?	☐	☐	NA
b. If yes (to 6a), are revised as-built plans available that reflect repair changes?	☐	☐	NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 90: AREA 2 BITCUTTER CONTAINMENT - CAS 02-20-01: Bitcutter/PS Inj. Wells (3) (RCRA)
CAS 02-20-03: Wastewater Pit

D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs (East Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fenceposts been damaged or their anchoring weakened?		✓	
c. Is the gate intact and functional?	✓		
d. Does the gate show evidence of tampering or damage?		✓	
e. Was the gate locked?	✓		
f. Are any of the use restriction signs damaged or missing?		✓	
g. Are all use restriction signs legible?	✓		
h. How many use restriction signs need to be replaced?		0	
i. Other?			NA
3. Waste unit cover (East Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA

POST-CLOSURE INSPECTION CHECKLIST

**CAU 90: AREA 2 BITCUTTER CONTAINMENT - CAS 02-20-01: Bitcutter/PS Inj. Wells (3) (RCRA)
CAS 02-20-03: Wastewater Pit**

4. Fences, gates, and signs (West Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fenceposts been damaged or their anchoring weakened?		✓	
c. Is the gate intact and functional?	✓		
d. Does the gate show evidence of tampering or damage?		✓	
e. Was the gate locked?	✓		
f. Are any of the use restriction signs damaged or missing?		✓	
g. Are all use restriction signs legible?	✓		
h. How many use restriction signs need to be replaced?		0	
i. Other?			NA

5. Waste unit cover (West Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA

6. Photograph Instructions:

- A standard set of color photographs is required. Six photographs must be taken during each inspection of CAU 90:
 - Three (3) of the west unit from outside the fence, one in each compass direction (i.e., N, S, E) and
 - Three (3) of the east unit from outside the fence, one in each compass direction (i.e., N, S, W).
- In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed.
- Additional photographs may also be taken.
- A photograph log entry will be made for each photograph taken.

7. Photograph Documentation:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have all photographs been taken as required by the photograph instructions?	✓		
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?		6	
d. Other?			NA

POST-CLOSURE INSPECTION CHECKLIST

CAU 90: AREA 2 BITCUTTER CONTAINMENT - CAS 02-20-01: Bitcutter/PS Inj. Wells (3) (RCRA)
CAS 02-20-03: Wastewater Pit

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		☒	
2. Are previous maintenance/repair actions satisfactory?	☒		
3. Are there any deficiencies that require a remedy other than general housekeeping (i.e., "minor") repairs?		☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
4. Will necessary repairs change the as-built condition of the unit?		☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Field conclusions/recommendations: <u>Site is in excellent condition</u> <u>No issues noted</u>			

F. CERTIFICATION

I have conducted an inspection of CAU 90, Area 2 Bitcutter Containment, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/: Glenn Richardson Date: 12/7/10
Printed Name: Glenn Richardson Title: Task Manager

Required Attachments:

- Field Notes (if any)
- Photos (or note File Location: S:\NTS\ER Share\ Photos\CAU 090\2010\12-7-2010 CAU 90 Inspection)

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis Date: 12/16/10
Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

POST-CLOSURE INSPECTION CHECKLIST

CAU 90: AREA 2 BITCUTTER CONTAINMENT - CAS 02-20-01: Bitcutter/PS Inj. Wells (3) (RCRA)
CAS 02-20-03: Wastewater Pit

Inspection Date and Time: 6/27/11 9:50 AM

Reason for Inspection: Semi-Annual

Date of Last Post-Closure Inspection: 12/7/10

Reason for Last Post-Closure Inspection: Semi-Annual

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn Richardson

Title: Task Manager

Organization: Environmental Restoration

Assistant Inspector: None

Title: —

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 90 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES NO EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

☒

☐

2. Has the Post-Closure Permit application been reviewed?

☒

☐

3. Has the Post-Closure Plan been reviewed?

☒

☐

4. Have the site as-built plans and site base map been reviewed?

☒

☐

5. Have the previous inspection reports been reviewed?

☒

☐

a. Were anomalies or trends detected on previous inspections?

☐

☒

b. Was maintenance performed?

☐

☒

6. Have the site maintenance and repair records been reviewed?

☒

☐

a. If so, has site repair resulted in a change from as-built conditions?

☐

☒

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

☐

☒

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 90: AREA 2 BITCUTTER CONTAINMENT - CAS 02-20-01: Bitcutter/PS Inj. Wells (3) (RCRA)
CAS 02-20-03: Wastewater Pit

D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs (East Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fenceposts been damaged or their anchoring weakened?		✓	
c. Is the gate intact and functional?	✓		
d. Does the gate show evidence of tampering or damage?		✓	
e. Was the gate locked?	✓		
f. Are any of the use restriction signs damaged or missing?		✓	
g. Are all use restriction signs legible?	✓		
h. How many use restriction signs need to be replaced?		0	
i. Other?		✓	NA
3. Waste unit cover (East Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?	✓		Noticed evidence of small animal burrowing. Photos will be taken to document need for corrective action.
g. Is vegetation growing on the cover?		✓	
h. Other (including trash, debris, etc within fenced area)?			NA

POST-CLOSURE INSPECTION CHECKLIST

CAU 90: AREA 2 BITCUTTER CONTAINMENT - CAS 02-20-01: Bitcutter/PS Inj. Wells (3) (RCRA)
CAS 02-20-03: Wastewater Pit

4. Fences, gates, and signs (West Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fenceposts been damaged or their anchoring weakened?		✓	
c. Is the gate intact and functional?	✓		
d. Does the gate show evidence of tampering or damage?		✓	
e. Was the gate locked?	✓		
f. Are any of the use restriction signs damaged or missing?		✓	
g. Are all use restriction signs legible?	✓		
h. How many use restriction signs need to be replaced?		0	
i. Other?		✓	NA

5. Waste unit cover (West Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?		✓	
h. Other (including trash, debris, etc within fenced area)?			NA

6. Photograph Instructions:

- A standard set of color photographs is required. Six photographs must be taken during each inspection of CAU 90:
 - Three (3) of the west unit from outside the fence, one in each compass direction (i.e., N, S, E) and
 - Three (3) of the east unit from outside the fence, one in each compass direction (i.e., N, S, W).
- In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed.
- Additional photographs may also be taken.
- A photograph log entry will be made for each photograph taken.

7. Photograph Documentation:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have all photographs been taken as required by the photograph instructions?	✓		
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?		10	
d. Other?	✓		NA Additional photos were taken to document small animal burrowing on the East Fenced Enclosure.

POST-CLOSURE INSPECTION CHECKLIST

CAU 90: AREA 2 BITCUTTER CONTAINMENT - CAS 02-20-01: Bitcutter/PS Inj. Wells (3) (RCRA)
CAS 02-20-03: Wastewater Pit

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are previous maintenance/repair actions satisfactory?	✓		
3. Are there any deficiencies that require a remedy other than general housekeeping (i.e., "minor") repairs?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
4. Will necessary repairs change the as-built condition of the unit?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Field conclusions/recommendations: <i>The UR signage and chain-link fencing are in excellent condition. There was evidence of small animal burrowing inside the East Fenced Enclosure (Postshot Well) that will need to be backfilled.</i>			

F. CERTIFICATION

I have conducted an inspection of CAU 90, Area 2 Bitcutter Containment, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: */s/: Glenn Richardson* Date: *6/29/11*

Printed Name: *Glenn Richardson* Title: *Task Manager*

Required Attachments:

1. Field Notes (if any)
2. Photos (or note File Location: S:\NTS\ER Share\Photos\CAU 090\2011\6-29-2011 CAU 90 Inspection)

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: */s/: Reed J. Poderis* Date: *7/27/11*

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

CORRECTIVE ACTION UNIT 91 INSPECTION CHECKLISTS

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POST-CLOSURE INSPECTION CHECKLIST

CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes

Inspection Date and Time: 3/9/11 9:45AM

Reason for Inspection: Semi-Annual

Date of Last Post-Closure Inspection: 9/8/10

Reason for Last Post-Closure Inspection: Semi-Annual

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn Richardson

Title: Task Manager

Organization: Environmental Restoration

Assistant Inspector: Dudley Emer

Title: Sr. Scientist

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 91 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES NO EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

✓

2. Has the Post-Closure Permit application been reviewed?

✓

3. Has the Post-Closure Plan been reviewed?

✓

4. Have the site as-built plans and site base map been reviewed?

✓

5. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

✓

b. Was maintenance performed?

✓

Vegetation removal activities were completed in Nov. 2010.

6. Have the site maintenance and repair records been reviewed?

✓

a. If so, has site repair resulted in a change from as-built conditions?

✓

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

✓

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes

D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site (i.e., the area within 1,000 feet of U-3fi and ER-3-3), including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist. The checklist should be completed during the site inspection. Every monument, site marker, sign, monitoring well access, and erosion control marker will be inspected.*
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fence posts been damaged or their anchoring weakened?		✓	
c. Is the gate intact and functional?	✓		
d. Does the gate show evidence of tampering or damage?		✓	
e. Was the gate locked?	✓		
f. Are any of the use restriction signs damaged or missing?		✓	
g. Are all use restriction signs legible?	✓		
h. How many use restriction signs need to be replaced?		0	
i. Other?		✓	NA
3. Waste unit cover:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA

POST-CLOSURE INSPECTION CHECKLIST

CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes

4. Photograph Instructions:

- A standard set of ten (10) color photographs is required to be taken during each inspection of CAU 91:
 - Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four (4) of the unit from outside the fence, one in each compass direction
 - Two (2) of the ER3-3 monitoring well surface with compass directions (N and S) noted on the photograph log
- In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed.
- Additional photographs may also be taken.
- A photograph log entry will be made for each photograph taken.

5. Photograph Documentation:

- Have all photographs been taken as required by the photograph instructions?
- Has a photograph log been prepared?
- How many photographs were taken?
- Other?

YES	NO	EXPLANATION (required if shaded box is checked)
☒	☐	
☒	☐	
	10	
☐	☐	NA ☒

E. FIELD CONCLUSIONS

	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?	☐	☒	
2. Are existing maintenance/repair actions satisfactory?	☒	☐	
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed?	☐	☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
4. Are there any deficiencies that require a remedy other than general housekeeping (i.e., "minor") repairs?	☐	☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?	☐	☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
6. Were there any indications of surface or subsurface subsidence or settling?	☐	☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

7. Field conclusions/recommendations: *The use restriction signs and fencing are in great condition. There was no evidence of subsidence cracks, settling, or animal burrows. No vegetation was noticed on the cover or around the concrete pads. This site has no issues or concerns.*

POST-CLOSURE INSPECTION CHECKLIST**CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes****F. CERTIFICATION**

I have conducted an inspection of CAU 91, Area 3 U-3fi Injection Well, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/: Glenn RichardsonDate: 3/9/11Printed Name: Glenn RichardsonTitle: Task Manager**Required Attachments:**

1. Field Notes (if any)
2. Photos (or note File Location: S:\NTS\ER Share\ Photos\CAU 091\2011\3-9-2011 inspection)

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. PoderisDate: 3/24/2011Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

POST-CLOSURE INSPECTION CHECKLIST

CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes

Inspection Date and Time: 9/13/11 11:35 am

Reason for Inspection: Semi-annual

Date of Last Post-Closure Inspection: 3/9/11

Reason for Last Post-Closure Inspection: Semi-Annual

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Rebecca King

Title: Project Mgr

Organization: Environmental Restoration

Assistant Inspector: Jim Traynor

Title: PROJECT MGR

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 91 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES NO EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

☒
☐

2. Has the Post-Closure Permit application been reviewed?

☒
☐

3. Has the Post-Closure Plan been reviewed?

☒
☐

4. Have the site as-built plans and site base map been reviewed?

☒
☐

5. Have the previous inspection reports been reviewed?

☒
☐

a. Were anomalies or trends detected on previous inspections?

☐
☒

b. Was maintenance performed?

☐
☒

6. Have the site maintenance and repair records been reviewed?

☒
☐

a. If so, has site repair resulted in a change from as-built conditions?

☐
☒

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

☐
☒

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes

D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site (i.e., the area within 1,000 feet of U-3fi and ER-3-3), including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist. The checklist should be completed during the site inspection. Every monument, site marker, sign, monitoring well access, and erosion control marker will be inspected.*
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		☒	
2. Fences, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		☒	
b. Have any fence posts been damaged or their anchoring weakened?		☒	
c. Is the gate intact and functional?	☒		
d. Does the gate show evidence of tampering or damage?		☒	
e. Was the gate locked?	☒		
f. Are any of the use restriction signs damaged or missing?		☒	
g. Are all use restriction signs legible?	☒		
h. How many use restriction signs need to be replaced?		0	
i. Other?			NA ☒
3. Waste unit cover:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		☒	
b. Is there evidence of cracking?		☒	
c. Is there evidence of erosion (wind or water)?		☒	
d. Is there evidence of human intrusion onto the cover?		☒	
e. Is there evidence of large animal intrusion onto the cover?		☒	
f. Is there evidence of animal burrowing?	☒		Animal burrow on North end
g. Is vegetation growing on the cover?	☒		Heavy Vegetation on cover
h. Other (including trash, debris, etc within fenced area)?			NA ☒

POST-CLOSURE INSPECTION CHECKLIST

CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes

4. Photograph Instructions:

- A standard set of ten (10) color photographs is required to be taken during each inspection of CAU 91:
 - Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four (4) of the unit from outside the fence, one in each compass direction
 - Two (2) of the ER3-3 monitoring well surface with compass directions (N and S) noted on the photograph log
- In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed.
- Additional photographs may also be taken.
- A photograph log entry will be made for each photograph taken.

5. Photograph Documentation:

	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have all photographs been taken as required by the photograph instructions?	☒	☐	
b. Has a photograph log been prepared?	☒	☐	
c. How many photographs were taken?		15	
d. Other?	☐	☐	NA ☒

E. FIELD CONCLUSIONS

	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?	☐	☒	
2. Are existing maintenance/repair actions satisfactory?	☒	☐	
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed?	☒	☐	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
4. Are there any deficiencies that require a remedy other than general housekeeping (i.e., "minor") repairs?	☐	☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?	☐	☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
6. Were there any indications of surface or subsurface subsidence or settling?	☐	☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

7. Field conclusions/recommendations:

Signs, fences, gate, and monuments in good condition. Heavy vegetation requires removal and herbicide application. Minor burrowing requires backfilling.

POST-CLOSURE INSPECTION CHECKLIST

CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes

F. CERTIFICATION

I have conducted an inspection of CAU 91, Area 3 U-3fi Injection Well, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/: Rebecca King

Date: 9/13/11

Printed Name: Rebecca King

Title: PROJECT MANAGER

Required Attachments:

1. Field Notes (if any)
2. Photos (or note File Location: S:\NTS\ER Share\CAU 91\ 2011\ 09-13-2011 Inspection

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis

Date: 9/15/2011

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

CORRECTIVE ACTION UNIT 92 INSPECTION CHECKLISTS

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Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

Inspection Date and Time: 10/19/10

Reason for Inspection:

Rain Event >0.5" in 24 hr

Date of Last Post-Closure Inspection: 9/8/10

Reason for Last Post-Closure Inspection:

Quarterly

Date of Last Rain Event: 10/17/10

Quantity of Rainfall in that event: 0.51 inches

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector:

Cale Richardson

Title:

Task Manager

Organization: Environmental Restoration

Assistant Inspector:

Dorley Ennis

Title:

So Scientist

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES

NO

EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

✓

2. Has the Post-Closure Permit application been reviewed?

✓

3. Has the Post-Closure Plan been reviewed?

✓

4. Have the site as-built plans and site base map been reviewed?

✓

5. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

b. Was maintenance performed?

✓

If maintenance was performed, are copies of all maintenance records in the project file?

✓

NA

6. Have the site maintenance and repair records been reviewed?

✓

a. If so, has site repair resulted in a change from as-built conditions?

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

NA

Vegetation Removal was performed in August 2010
↓ RSP 10/12/10**C. SITE INSPECTION PREPARATION**

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST

CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)

D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features on Yucca Lake that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fencing, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fence posts been damaged or their anchoring weakened?		✓	
c. Are any of the use restriction signs damaged or missing?		✓	
d. Are all use restriction signs legible?	✓		
e. How many use restriction signs need to be replaced?		0	
f. Are any of the URMA signs damaged or missing?		✓	
g. Are all URMA signs legible?	✓		
h. How many URMA signs need to be replaced?		0	
i. Is the gate intact and functional?	✓		
j. Does the gate show evidence of tampering or damage?		✓	
k. Was the gate locked?	✓		
l. Does the wave barrier require repair?		✓	
m. Is there standing water within or at the fenceline?		✓	
If yes, what is the playa water elevation, as measured on the depth gauge attached to the fence perimeter?		0.0	
n. Other?			NA
3. Waste unit cover:	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST
CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)

3. Waste unit cover (continued):	YES	NO	EXPLANATION
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?	✓		Minor vegetation noted & photographed on cover
h. Other (including trash, debris, etc within fenced area)?		✓	NA

Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.

4. Subsidence survey markers:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have any of the five (5) subsidence survey markers been disturbed?		✓	
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓	
c. Is there excessive vegetation around the subsidence survey markers?		✓	
d. Other?			NA

5. Photograph Instructions:

- A standard set of color photographs is required. Eight photographs must be taken during each inspection of CAU 92:
 - Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W).
- In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed.
- Additional photographs may also be taken.
- A photograph log entry will be made for each photograph taken.

6. Photograph Documentation:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have all photographs been taken as required by the photograph instructions?	✓		8 photos taken as Required
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?	9		photo was taken to document vegetation on the top & edge of cover in addition to 8 Required photos inside & outside fence
d. Other?		✓	NA

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes small - less than 2 inches deep - cracks or settling imperfections of the cover)? [minor repairs]		✓	If "yes", describe in Field conclusions/recommendations and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

(1) Quarterly, or

POST-CLOSURE INSPECTION CHECKLIST

E. FIELD CONCLUSIONS (continued)

YES

NO

EXPLANATION (required if shaded box is checked)

4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 2 inches deep) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]

If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

5. Will necessary repairs change the as-built condition of the unit?

If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

6. Field conclusions/recommendations:

Site, Sign & Fence in good condition.
Some sparse vegetation is growing
on the cover - Recommend removal.

F. CERTIFICATION

I have conducted an inspection of CAU 92, Area 6 Decon Pond Facility, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/ Glenn Richardson Date: 11/1/2011

Date: 10/19/10

Printed Name: Glenn Richardson

Title: Task Manager

Required Attachments:

2. Photos (or note File Location: S:\NTS\ER Share\ Photos\CAU 092\2010\10-19-2010 Precip inspection

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis

Date: 10-27-10

Printed Name: Thomas ~~A.~~ Thiele (or designee)

Distribution: Original – Task Manager

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

Inspection Date and Time: 12/7/10 11:25 am	Reason for Inspection: Quarterly
Date of Last Post-Closure Inspection: 10/19/10	Reason for Last Post-Closure Inspection: Precipitation Event
Date of Last Rain Event: 10/17/10	Quantity of Rainfall in that event: 0.5 inches

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn Richardson Title: Task Manager Organization: Environmental Restoration

Assistant Inspector: Dudley Emery Title: Sr. Scientist Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)	YES	NO	EXPLANATION (required if shaded box is checked)
1. Has the Post-Closure Permit been reviewed?	☒	☐	
2. Has the Post-Closure Permit application been reviewed?	☒	☐	
3. Has the Post-Closure Plan been reviewed?	☒	☐	
4. Have the site as-built plans and site base map been reviewed?	☒	☐	
5. Have the previous inspection reports been reviewed?	☐	☐	
a. Were anomalies or trends detected on previous inspections?	☐	☐	
b. Was maintenance performed?	☒	☐	Vegetation Removal
If maintenance was performed, are copies of all maintenance records in the project file?	☐	☐	NA
6. Have the site maintenance and repair records been reviewed?	☐	☐	
a. If so, has site repair resulted in a change from as-built conditions?	☐	☐	NA
b. If yes (to 6a), are revised as-built plans available that reflect repair changes?	☐	☐	NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST
CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)
D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features on Yucca Lake that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fencing, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fence posts been damaged or their anchoring weakened?		✓	
c. Are any of the use restriction signs damaged or missing?		✓	
d. Are all use restriction signs legible?	✓		
e. How many use restriction signs need to be replaced?	0		
f. Are any of the URMA signs damaged or missing?		✓	
g. Are all URMA signs legible?	✓		
h. How many URMA signs need to be replaced?	0		
i. Is the gate intact and functional?	✓		
j. Does the gate show evidence of tampering or damage?		✓	
k. Was the gate locked?	✓		
l. Does the wave barrier require repair?		✓	
m. Is there standing water within or at the fenceline?			Small Puddle at foot of barrier (NE)
If yes, what is the playa water elevation, as measured on the depth gauge attached to the fence perimeter?	0		
n. Other?		NA	
3. Waste unit cover:	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

3. Waste unit cover (continued):	YES	NO	EXPLANATION	Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
b. Is there evidence of cracking?		✓		
c. Is there evidence of erosion (wind or water)?		✓		
d. Is there evidence of human intrusion onto the cover?		✓		
e. Is there evidence of large animal intrusion onto the cover?		✓		
f. Is there evidence of animal burrowing?		✓		
g. Is vegetation growing on the cover?		✓		
h. Other (including trash, debris, etc within fenced area)?			NA	✓
4. Subsidence survey markers:	YES	NO	EXPLANATION (required if shaded box is checked)	
a. Have any of the five (5) subsidence survey markers been disturbed?		✓		
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓		
c. Is there excessive vegetation around the subsidence survey markers?		✓		
d. Other?			NA	✓
5. Photograph Instructions:				
<ul style="list-style-type: none"> A standard set of color photographs is required. Eight photographs must be taken during each inspection of CAU 92: <ul style="list-style-type: none"> Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W) Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W). In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. Additional photographs may also be taken. A photograph log entry will be made for each photograph taken. 				
6. Photograph Documentation:	YES	NO	EXPLANATION (required if shaded box is checked)	
a. Have all photographs been taken as required by the photograph instructions?	✓			
b. Has a photograph log been prepared?	✓			
c. How many photographs were taken?		9		
d. Other?			NA	✓
E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)	
1. Are more frequent inspections required?		✓		
2. Are existing maintenance/repair actions satisfactory?	✓			
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes small – less than 2 inches deep – cracks or settling imperfections of the cover)? [minor repairs]		✓	If "yes", describe in Field conclusions/recommendations and the Task Manager must complete the "Follow-up Actions" (not part of checklist)	

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)****E. FIELD CONCLUSIONS (continued)**

YES

NO

EXPLANATION (required if shaded box is checked)

4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 2 inches deep) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]

☒

If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

5. Will necessary repairs change the as-built condition of the unit?

☒

If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

6. Field conclusions/recommendations:

Site in good condition
 Small puddle noted at
 foot of cover on NE margin.

F. CERTIFICATION

I have conducted an inspection of CAU 92, Area 6 Decon Pond Facility, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/ Glenn Richardson

Date: 12/7/10

Printed Name: Glenn Richardson

Title: Task Manager

Required Attachments:

1. Field Notes

2. Photos (or note File Location: S:\NTS\ER Share\Photos\CAU 092\2010\12-7-2010 Inspection)

Distribution: Original – Industrial Sites Project Manager

Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/ Reed J. Poderis

Date: 12/16/10

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

Inspection Requirements:
 (1) Quarterly, or
 (2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST

CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)

Inspection Date and Time: <u>12/23/10 0915</u>	Reason for Inspection: <u>Precipitation Event 20.5 in</u>
If this inspection is for a rain event, date of event: <u>12/17/10 - 12/22/10</u>	Quantity of Rainfall: <u>3.38</u> inches
Date of Last Post-Closure Inspection: <u>12/7/10</u>	Reason for Last Post-Closure Inspection: <u>Quarterly</u>

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: <u>Brian Konrad</u>	Title: <u>Supervisor</u>	Organization: Environmental Restoration
Assistant Inspector: <u>None</u> ^{NSD} <u>12/21/10</u>	Title: <u>—</u>	Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)	YES	NO	EXPLANATION (required if shaded box is checked)
1. Has the Post-Closure Permit been reviewed?	✓		
2. Has the Post-Closure Permit application been reviewed?	✓		
3. Has the Post-Closure Plan been reviewed?	✓		
4. Have the site as-built plans and site base map been reviewed?	✓		
5. Have the previous inspection reports been reviewed?	✓		
a. Were anomalies or trends detected on previous inspections?		✓	
b. Was maintenance performed?		✓	
If maintenance was performed, are copies of all maintenance records in the project file?			NA ✓
6. Have the site maintenance and repair records been reviewed?	✓		
a. If so, has site repair resulted in a change from as-built conditions?		✓	NA
b. If yes (to 6a), are revised as-built plans available that reflect repair changes?			NA ✓

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- a. Camera, digital storage drive, and extra batteries
- b. Keys to locks
- c. Clipboard
- d. Tape measure
- e. Radio, pager, etc.
- f. Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- g. Other miscellaneous support equipment

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST
CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)
D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features on Yucca Lake that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fencing, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fence posts been damaged or their anchoring weakened?		✓	
c. Are any of the use restriction signs damaged or missing?		✓	
d. Are all use restriction signs legible?	✓		
e. How many use restriction signs need to be replaced?		0	
f. Are any of the URMA signs damaged or missing?		✓	
g. Are all URMA signs legible?	✓		
h. How many URMA signs need to be replaced?		0	
i. Is the gate intact and functional?	✓		
j. Does the gate show evidence of tampering or damage?		✓	
k. Was the gate locked?	✓		
l. Does the wave barrier require repair?		✓	
m. Is there standing water within or at the fenceline?	✓		water not on cover
If yes, what is the playa water elevation, as measured on the depth gauge attached to the fence perimeter?		1 inch	
n. Other?			NA ✓
3. Waste unit cover:	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST
CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)

3. Waste unit cover (continued):	YES	NO	EXPLANATION	Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
b. Is there evidence of cracking?		✓		
c. Is there evidence of erosion (wind or water)?		✓		
d. Is there evidence of human intrusion onto the cover?		✓		
e. Is there evidence of large animal intrusion onto the cover?		✓		
f. Is there evidence of animal burrowing?		✓		
g. Is vegetation growing on the cover?		✓		
h. Other (including trash, debris, etc within fenced area)?		✓	NA	

4. Subsidence survey markers:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have any of the five (5) subsidence survey markers been disturbed?		✓	
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓	
c. Is there excessive vegetation around the subsidence survey markers?		✓	
d. Other?			NA ✓

5. Photograph Instructions:

- A standard set of color photographs is required. Eight photographs must be taken during each inspection of CAU 92:
 - Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W).
- In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed.
- Additional photographs may also be taken.
- A photograph log entry will be made for each photograph taken.

6. Photograph Documentation:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have all photographs been taken as required by the photograph instructions?	✓		taken as a BMP
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?		10	
d. Other?			NA ✓

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes small - less than 2 inches deep - cracks or settling imperfections of the cover)? [minor repairs]		✓	If "yes", describe in Field conclusions/recommendations and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

(1) Quarterly, or

POST-CLOSURE INSPECTION CHECKLIST

E. FIELD CONCLUSIONS (continued)

YES

NO

4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 2 inches deep) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]

✓

If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

5. Will necessary repairs change the as-built condition of the unit?

✓

If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

6. Field conclusions/recommendations:

6. Field conclusions/recommendations: Noticed standing water inside fence but not on cover. Wave barriers in good shape. No corrective actions are required at this time.

I have conducted an inspection of CAU 92, Area 6 Decon Pond Facility, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/: Brian Konrad

Date:

12/23/10

Printed Name:

Brian Konrad

Title:

Supervisor

1. Field Notes

2. Photos (or note File Location: S:\NTS\ER Share\ CA492/2010/12-23-2010 Presp inspection.

Distribution: Original – Industrial Sites Project Manager

Copy – Task Manager

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis

Date:

Date: 12/27/2010

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

Inspection Date and Time: <u>3/9/11 10:52 AM</u>	Reason for Inspection: <u>Quarterly</u>
If this inspection is for a rain event, date of event: <u>N/A</u>	Quantity of Rainfall: <u>—</u> inches
Date of Last Post-Closure Inspection: <u>12/23/10</u>	Reason for Last Post-Closure Inspection: <u>Precipitation Event</u>
Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada	
Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project	
Chief Inspector: <u>Glenn Richardson</u>	Title: <u>Task Manager</u> Organization: Environmental Restoration
Assistant Inspector: <u>Dudley Emer</u>	Title: <u>Sr. Scientist</u> Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

	YES	NO	EXPLANATION (required if shaded box is checked)
1. Has the Post-Closure Permit been reviewed?	☒	☐	
2. Has the Post-Closure Permit application been reviewed?	☒	☐	
3. Has the Post-Closure Plan been reviewed?	☒	☐	
4. Have the site as-built plans and site base map been reviewed?	☒	☐	
5. Have the previous inspection reports been reviewed?	☒	☐	
a. Were anomalies or trends detected on previous inspections?	☐	☒	
b. Was maintenance performed?	☐	☒	
If maintenance was performed, are copies of all maintenance records in the project file?		☒	NA
6. Have the site maintenance and repair records been reviewed?	☒	☐	
a. If so, has site repair resulted in a change from as-built conditions?	☐	☒	NA
b. If yes (to 6a), are revised as-built plans available that reflect repair changes?	☐	☒	NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)****D. SITE INSPECTION**

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features on Yucca Lake that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fencing, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fence posts been damaged or their anchoring weakened?		✓	
c. Are any of the use restriction signs damaged or missing?		✓	
d. Are all use restriction signs legible?	✓		
e. How many use restriction signs need to be replaced?	0		
f. Are any of the URMA signs damaged or missing?		✓	
g. Are all URMA signs legible?	✓		
h. How many URMA signs need to be replaced?	0		
i. Is the gate intact and functional?	✓		
j. Does the gate show evidence of tampering or damage?		✓	
k. Was the gate locked?	✓		
l. Does the wave barrier require repair?		✓	
m. Is there standing water within or at the fenceline?		✓	
If yes, what is the playa water elevation, as measured on the depth gauge attached to the fence perimeter?	1		
n. Other?			NA ✓
3. Waste unit cover:	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

3. Waste unit cover (continued):	YES	NO	EXPLANATION
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA

Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.

4. Subsidence survey markers:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have any of the five (5) subsidence survey markers been disturbed?		✓	
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓	
c. Is there excessive vegetation around the subsidence survey markers?		✓	
d. Other?		✓	NA

5. Photograph Instructions:

- A standard set of color photographs is required. Eight photographs must be taken during each inspection of CAU 92:
 - Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W).
- In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed.
- Additional photographs may also be taken.
- A photograph log entry will be made for each photograph taken.

6. Photograph Documentation:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have all photographs been taken as required by the photograph instructions?	✓		
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?	8		
d. Other?		✓	NA

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes small – less than 2 inches deep – cracks or settling imperfections of the cover)? [minor repairs]		✓	If "yes", describe in Field conclusions/recommendations and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

Inspection Requirements:

- (1) Quarterly, or
- (2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

E. FIELD CONCLUSIONS (continued)	YES	NO	EXPLANATION (required if shaded box is checked)
4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 2 inches deep) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
6. Field conclusions/recommendations: <i>The use restriction signs, fencing, and surface grade monuments are in good condition. There is no evidence of damage to the wave barriers. Also, there is no evidence of new vegetation along the edges or on top of the cover. No animal burrowing, subsidence cracks, or settling was noticed on the waste unit cover. There are no follow-up actions required at this site.</i>			
F. CERTIFICATION			
I have conducted an inspection of CAU 92, Area 6 Decon Pond Facility, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.			
Chief Inspector's Signature: <i>/s/ Glenn Richardson</i>		Date: <i>3/9/11</i>	
Printed Name: <i>Glenn Richardson</i>		Title: <i>Task Manager</i>	

Required Attachments:

1. Field Notes
2. Photos (or note File Location: *S:\NTS\ER Share\ Photos\ CAU 092\ 2011*)

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION	
I have reviewed this checklist and attachments and have verified that it is complete.	
Signature: <i>/s/ Reed J. Poderis</i>	Date: <i>3/24/2011</i>
Printed Name: <i>Thomas A. Thiele</i> (or designee)	

Distribution: Original – Task Manager

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

Inspection Date and Time: 5/10/11 13:30

Reason for Inspection: Precipitation > 0.5"

If this inspection is for a rain event, date of event: 5/9/11

Quantity of Rainfall: 0.64 inches

Date of Last Post-Closure Inspection: 3/9/11

Reason for Last Post-Closure Inspection: Quarterly

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Dudley Emer

Title: Sr Scientist

Organization: Environmental Restoration

Assistant Inspector: —

Title: —

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES

NO

EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

✓

2. Has the Post-Closure Permit application been reviewed?

✓

3. Has the Post-Closure Plan been reviewed?

✓

4. Have the site as-built plans and site base map been reviewed?

✓

5. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

✓

b. Was maintenance performed?

✓

If maintenance was performed, are copies of all maintenance records in the project file?

NA

6. Have the site maintenance and repair records been reviewed?

✓

a. If so, has site repair resulted in a change from as-built conditions?

✓

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)****D. SITE INSPECTION**

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features on Yucca Lake that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?	☒	☐	
2. Fencing, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?	☒	☐	18 posts have fence restraints broken on the N.W. Side.
b. Have any fence posts been damaged or their anchoring weakened?	☐	☒	
c. Are any of the use restriction signs damaged or missing?	☐	☒	
d. Are all use restriction signs legible?	☒	☐	
e. How many use restriction signs need to be replaced?	☐	☐	0
f. Are any of the URMA signs damaged or missing?	☐	☒	1 Sign needs to be Re hung
g. Are all URMA signs legible?	☒	☐	
h. How many URMA signs need to be replaced?	☐	☐	0
i. Is the gate intact and functional?	☒	☐	
j. Does the gate show evidence of tampering or damage?	☐	☒	
k. Was the gate locked?	☒	☐	
l. Does the wave barrier require repair?	☐	☒	
m. Is there standing water within or at the fenceline?	☐	☒	
If yes, what is the playa water elevation, as measured on the depth gauge attached to the fence perimeter?	☐	☐	0
n. Other?	☐	☐	NA
3. Waste unit cover:	YES	NO	EXPLANATION
a. Is there evidence of settling?	☐	☒	Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

3. Waste unit cover (continued):	YES	NO	EXPLANATION
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA

Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.

4. Subsidence survey markers:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have any of the five (5) subsidence survey markers been disturbed?		✓	
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓	
c. Is there excessive vegetation around the subsidence survey markers?		✓	
d. Other?			NA

5. Photograph Instructions:

- A standard set of color photographs is required. Eight photographs must be taken during each inspection of CAU 92:
 - Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W).
- In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed.
- Additional photographs may also be taken.
- A photograph log entry will be made for each photograph taken.

6. Photograph Documentation:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have all photographs been taken as required by the photograph instructions?	✓		
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?			8+1 water level gauge + 4 in & 9 out
d. Other?			NA

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?		✓	Reseal fence on N.W. side
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes small - less than 2 inches deep - cracks or settling imperfections of the cover)? [minor repairs]		✓	If "yes", describe in Field conclusions/recommendations and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

E. FIELD CONCLUSIONS (continued)	YES	NO	EXPLANATION (required if shaded box is checked)
4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 2 inches deep) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
6. Field conclusions/recommendations: Precipitation on 10/9/11 showed no standing water or damage. The fence on the N.W. side has wind damage at the Reservoir (Broken) the Secure the fence to the posts along 3/4 of the N.W. side. This will require repair. Site is in excellent condition otherwise.			

F. CERTIFICATION

I have conducted an inspection of CAU 92, Area 6 Decon Pond Facility, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/: Dudley Emer

Date: 5/10/11

Printed Name: Dudley Emer

Title: S. Scientist

Required Attachments:

1. Field Notes
2. Photos (or note File Location: S:\NTS\ER Share\Photos\CAU 092\2011\CAU 92 5.10.11 precip inspection

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis

Date: 5/18/2011

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**Inspection Date and Time: 6/30/11 10:35 AMReason for Inspection: QuarterlyIf this inspection is for a rain event, date of event: N/AQuantity of Rainfall: — inches —Date of Last Post-Closure Inspection: 5/10/11Reason for Last Post-Closure Inspection: Precipitation Event

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn RichardsonTitle: Task Manager

Organization: Environmental Restoration

Assistant Inspector: NoneTitle: —

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES NO EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

☒☐

2. Has the Post-Closure Permit application been reviewed?

☒☐

3. Has the Post-Closure Plan been reviewed?

☒☐

4. Have the site as-built plans and site base map been reviewed?

☒☐

5. Have the previous inspection reports been reviewed?

☒☐

a. Were anomalies or trends detected on previous inspections?

☐☒

b. Was maintenance performed?

☒☐

If maintenance was performed, are copies of all maintenance records in the project file?

☒☐Fencing repairs were completed and one radiological sign was replaced.

NA

6. Have the site maintenance and repair records been reviewed?

☒☐

a. If so, has site repair resulted in a change from as-built conditions?

☐☒

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

☐☐

NA

☒**C. SITE INSPECTION PREPARATION**

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)****D. SITE INSPECTION**

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features on Yucca Lake that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fencing, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fence posts been damaged or their anchoring weakened?		✓	
c. Are any of the use restriction signs damaged or missing?		✓	
d. Are all use restriction signs legible?	✓		
e. How many use restriction signs need to be replaced?		0	
f. Are any of the URMA signs damaged or missing?		✓	
g. Are all URMA signs legible?	✓		
h. How many URMA signs need to be replaced?		0	
i. Is the gate intact and functional?	✓		
j. Does the gate show evidence of tampering or damage?		✓	
k. Was the gate locked?	✓		
l. Does the wave barrier require repair?		✓	
m. Is there standing water within or at the fenceline?		✓	
If yes, what is the playa water elevation, as measured on the depth gauge attached to the fence perimeter?		0	
n. Other?		✓	NA
3. Waste unit cover:	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST
CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)

	YES	NO	EXPLANATION
3. Waste unit cover (continued): <div style="float: right; border: 1px solid black; padding: 2px; font-size: small;"> Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions. </div>			
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?	✓		New vegetation on the edge of the cover.
h. Other (including trash, debris, etc within fenced area)?		✓	NA
4. Subsidence survey markers: <div style="float: right; font-size: small;">EXPLANATION (required if shaded box is checked)</div>			
a. Have any of the five (5) subsidence survey markers been disturbed?		✓	
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓	
c. Is there excessive vegetation around the subsidence survey markers?		✓	
d. Other?		✓	NA
5. Photograph Instructions: <ul style="list-style-type: none"> A standard set of color photographs is required. Eight photographs must be taken during each inspection of CAU 92: <ul style="list-style-type: none"> Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W) Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W). In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. Additional photographs may also be taken. A photograph log entry will be made for each photograph taken. 			
6. Photograph Documentation: <div style="float: right; font-size: small;">EXPLANATION (required if shaded box is checked)</div>			
a. Have all photographs been taken as required by the photograph instructions?	✓		
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?		13	
d. Other?	✓		NA Additional photos were taken to document new vegetation along the edges of the cover.
E. FIELD CONCLUSIONS <div style="float: right; font-size: small;">EXPLANATION (required if shaded box is checked)</div>			
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes small - less than 2 inches deep - cracks or settling imperfections of the cover)? [minor repairs]	✓		If "yes", describe in Field conclusions/recommendations and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

(2) Rain Event of >0.5 inches in 24 hours

CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

Inspection Date and Time: 9/13/11 12:20 pm

Reason for Inspection: QUARTERLY

If this inspection is for a rain event, date of event: NA

Quantity of Rainfall: - inches -

Date of Last Post-Closure Inspection: 6/30/11

Reason for Last Post-Closure Inspection: QUARTERLY

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Rebecca King Title: PROJECT MGR Organization: Environmental Restoration

Assistant Inspector: Jim TRAYNOR Title: PROJECT MGR Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES

NO

EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

✓

2. Has the Post-Closure Permit application been reviewed?

✓

3. Has the Post-Closure Plan been reviewed?

✓

4. Have the site as-built plans and site base map been reviewed?

✓

5. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

✓

b. Was maintenance performed?

✓

If maintenance was performed, are copies of all maintenance records in the project file?

✓

NA

Vegetation was removed 7/18/11
and herbicide applied

6. Have the site maintenance and repair records been reviewed?

✓

a. If so, has site repair resulted in a change from as-built conditions?

✓

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

✓

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST
CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)
D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features on Yucca Lake that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fencing, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fence posts been damaged or their anchoring weakened?		✓	
c. Are any of the use restriction signs damaged or missing?	PAV 5/12/18	✓	
d. Are all use restriction signs legible?		✓	2 signs have faded lettering
e. How many use restriction signs need to be replaced?		2	
f. Are any of the URMA signs damaged or missing?		✓	
g. Are all URMA signs legible?	✓		
h. How many URMA signs need to be replaced?		0	
i. Is the gate intact and functional?	✓		
j. Does the gate show evidence of tampering or damage?		✓	
k. Was the gate locked?	✓		
l. Does the wave barrier require repair?	✓		barrier on west and north east requires repair
m. Is there standing water within or at the fenceline?		✓	
If yes, what is the playa water elevation, as measured on the depth gauge attached to the fence perimeter?		0 in	
n. Other?			NA
3. Waste unit cover:	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	

Inspection Requirements:

(1) Quarterly, or

(2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)**

3. Waste unit cover (continued):	YES	NO	EXPLANATION	Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
b. Is there evidence of cracking?		✓		
c. Is there evidence of erosion (wind or water)?		✓		
d. Is there evidence of human intrusion onto the cover?		✓		
e. Is there evidence of large animal intrusion onto the cover?		✓		
f. Is there evidence of animal burrowing?		✓		
g. Is vegetation growing on the cover?	✓		Sparse vegetation is over most of cover + West side	
h. Other (including trash, debris, etc within fenced area)?			NA	✓
4. Subsidence survey markers:	YES	NO	EXPLANATION (required if shaded box is checked)	
a. Have any of the five (5) subsidence survey markers been disturbed?		✓		
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓		
c. Is there excessive vegetation around the subsidence survey markers?		✓		
d. Other?			NA	✓
5. Photograph Instructions:				
<ul style="list-style-type: none"> A standard set of color photographs is required. Eight photographs must be taken during each inspection of CAU 92: <ul style="list-style-type: none"> Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W) Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W). In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. Additional photographs may also be taken. A photograph log entry will be made for each photograph taken. 				
6. Photograph Documentation:	YES	NO	EXPLANATION (required if shaded box is checked)	
a. Have all photographs been taken as required by the photograph instructions?	✓			
b. Has a photograph log been prepared?	✓			
c. How many photographs were taken?	15			
d. Other?			NA	✓
E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)	
1. Are more frequent inspections required?		✓		
2. Are existing maintenance/repair actions satisfactory?	✓			
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes small – less than 2 inches deep – cracks or settling imperfections of the cover)? [minor repairs]	✓		If "yes", describe in Field conclusions/recommendations and the Task Manager must complete the "Follow-up Actions" (not part of checklist)	

Inspection Requirements:

- (1) Quarterly, or
- (2) Rain Event of >0.5 inches in 24 hours

POST-CLOSURE INSPECTION CHECKLIST**CAU 92: AREA 6 DECON POND FACILITY - CAS 06-05-02: Decontamination Pond (RCRA)****E. FIELD CONCLUSIONS (continued)**

YES

NO

EXPLANATION (required if shaded box is checked)

4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 2 inches deep) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]

✓

If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

5. Will necessary repairs change the as-built condition of the unit?

✓

If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

6. Field conclusions/recommendations:

Fencing and gate are in good condition. Two UR signs are faded and require replacement. Sparse but widespread vegetation on cover requires herbicide application. Wave barrier, especially on west and northeast requires repair or realignment of slats. No signs of subsidence, cracking or animal burrowing on cover.

F. CERTIFICATION

I have conducted an inspection of CAU 92, Area 6 Decon Pond Facility, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/: Rebecca King

Date: 9/13/11

Printed Name:

Rebecca King

Title:

PROJECT MGR

Required Attachments:

1. Field Notes

2. Photos (or note File Location: S:\NTS\ER Share\2011\09-13-2011 CAU 92 Inspection

Distribution: Original – Industrial Sites Project Manager

Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis

Date: 9/15/2011

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

CORRECTIVE ACTION UNIT 110 INSPECTION CHECKLISTS

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POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

Inspection Date and Time: 12/7/10 10:30AM

Reason for Inspection: Quarterly

Date of Last Post-Closure Inspection: 9/8/10

Reason for Last Post-Closure Inspection: Quarterly

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn Richardson

Title: Task Manager

Organization: Environmental Restoration

Assistant Inspector: Dudley Emer

Title: Sr. Scientist

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 91 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

	YES	NO	EXPLANATION (required if shaded box is checked)
1. Has the Post-Closure Permit been reviewed?	✓		
2. Has the Post-Closure Permit application been reviewed?	✓		
3. Has the Post-Closure Plan been reviewed?	✓		
4. Have the site as-built plans and site base map been reviewed?	✓		
5. Have the previous inspection reports been reviewed?	✓		
a. Were anomalies or trends detected on previous inspections?		✓	
b. Was maintenance performed?	✓		Re-secured loose URMA signs along the north side of the fence.
6. Have the site maintenance and repair records been reviewed?	✓		
a. If so, has site repair resulted in a change from as-built conditions?		✓	NA
b. If yes (to 6a), are revised as-built plans available that reflect repair changes?			NA ✓

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?	✓		South soil pile at the East TDR Rabbit fence is pulled down 11
b. Is there damage to or a break in the chicken wire fence?	✓		
c. Have any fenceposts been damaged or their anchoring weakened?		✓	
d. Is the gate intact and functional?	✓		
e. Does the gate show evidence of tampering or damage?		✓	
f. Was the gate locked?	✓		
g. Are any of the use restriction signs damaged or missing?		✓	
h. Are all use restriction signs legible?	✓		
i. How many use restriction signs need to be replaced?		0	
3. Waste unit cover (Western portion, "ax"):	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is there a change or difference in vegetation (i.e., is the vegetation growing on the cover inconsistent with the naturally-occurring vegetation growing outside of the unit)?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

	YES	NO	EXPLANATION
<div> 4. Waste unit cover (Eastern portion, "bl"): <div> Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions. </div> </div>			
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is there a change or difference in vegetation (i.e., is the vegetation growing on the cover inconsistent with the naturally-occurring vegetation growing outside of the unit)?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA
<div> 5. Subsidence survey markers and TDR Probes: <div> EXPLANATION (required if shaded box is checked) </div> </div>			
a. Have any of the seven (7) subsidence survey markers been disturbed?		✓	
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓	
c. Is there excessive vegetation around the subsidence survey markers?		✓	
d. Is there any evidence that TDR probes have been disturbed or the wires damaged?		✓	
e. Other?		✓	NA
<div> 6. Photograph Instructions: <ul style="list-style-type: none"> A standard set of eight (8) color photographs is required to be taken during each inspection of CAU 110: <ul style="list-style-type: none"> Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W) Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W). In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. Additional photographs may also be taken. A photograph log entry will be made for each photograph taken. </div>			
<div> 7. Photograph Documentation: <div> EXPLANATION (required if shaded box is checked) </div> </div>			
a. Have all photographs been taken as required by the photograph instructions?	✓		
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?	10		
d. Other?		✓	NA
<div> E. FIELD CONCLUSIONS <div> EXPLANATION (required if shaded box is checked) </div> </div>			
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

E. FIELD CONCLUSIONS (continued)	YES	NO	EXPLANATION (required if shaded box is checked)
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes cracks or settling imperfections less than 6 inches deep that extend less than 3 feet on the cover)? [minor repairs]	☒		If "yes", describe in Field conclusions/recommendations
4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 6 inches deep and 3 feet long) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]		☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
6. Field conclusions/recommendations: <i>Overall site conditions are good, however, a small section of rabbit/chicken-wire fencing was down that will need repair. There is no evidence of settling or subsidence on the waste unit cover. The vegetation appears to be maturing at a rapid rate on the cover in those specific areas that re-planting occurred. The only corrective action consists of minor fence repair.</i>			

F. CERTIFICATION

I have conducted an inspection of CAU 110, Area 3 WMD U-3ax/bl Crater, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: */s/ Glenn Richardson* Date: *12/7/10*
 Printed Name: *Glenn Richardson* Title: *Task Manager*

Required Attachments:

1. Field Notes
2. Photos (or note File Location: S:\NTS\ER Share\Photos\CAU 110\2010\12-7-2010 Inspection)

Distribution: Original – Industrial Sites Project Manager
 Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: */s/ Reed J. Poderis* Date: *12/16/10*
 Printed Name: *Thomas A. Thiele (or designee)*

Distribution: Original – Task Manager

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

Inspection Date and Time: 3/9/11 10:00AM

Reason for Inspection: Quarterly

Date of Last Post-Closure Inspection: 12/7/10

Reason for Last Post-Closure Inspection: Quarterly

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn Richardson

Title: Task Manager

Organization: Environmental Restoration

Assistant Inspector: Dudley Emer

Title: Sr. Scientist

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 91 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES

NO

EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

✓

2. Has the Post-Closure Permit application been reviewed?

✓

3. Has the Post-Closure Plan been reviewed?

✓

4. Have the site as-built plans and site base map been reviewed?

✓

5. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

✓

b. Was maintenance performed?

✓

Subsidence repairs were completed in Feb. 2011.
Fence repairs were completed in Jan. 2011.

6. Have the site maintenance and repair records been reviewed?

✓

a. If so, has site repair resulted in a change from as-built conditions?

✓

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

✓

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Is there damage to or a break in the chicken wire fence?		✓	
c. Have any fenceposts been damaged or their anchoring weakened?		✓	
d. Is the gate intact and functional?	✓		
e. Does the gate show evidence of tampering or damage?		✓	
f. Was the gate locked?	✓		
g. Are any of the use restriction signs damaged or missing?		✓	
h. Are all use restriction signs legible?	✓		
i. How many use restriction signs need to be replaced?		0	
3. Waste unit cover (Western portion, "ax"):	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is there a change or difference in vegetation (i.e., is the vegetation growing on the cover inconsistent with the naturally-occurring vegetation growing outside of the unit)?		✓	
h. Other (including trash, debris, etc within fenced area)?	✓		NA

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

	YES	NO	EXPLANATION
<div> 4. Waste unit cover (Eastern portion, "bl"): </div>			
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is there a change or difference in vegetation (i.e., is the vegetation growing on the cover inconsistent with the naturally-occurring vegetation growing outside of the unit)?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA
<div> 5. Subsidence survey markers and TDR Probes: </div>			
a. Have any of the seven (7) subsidence survey markers been disturbed?		✓	
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓	
c. Is there excessive vegetation around the subsidence survey markers?		✓	
d. Is there any evidence that TDR probes have been disturbed or the wires damaged?		✓	
e. Other?			NA
<div> 6. Photograph Instructions: <ul style="list-style-type: none"> A standard set of eight (8) color photographs is required to be taken during each inspection of CAU 110: <ul style="list-style-type: none"> Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W) Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W). In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. Additional photographs may also be taken. A photograph log entry will be made for each photograph taken. </div>			
<div> 7. Photograph Documentation: </div>			
a. Have all photographs been taken as required by the photograph instructions?	✓		
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?	11		
d. Other?			NA
<div> E. FIELD CONCLUSIONS </div>			
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

E. FIELD CONCLUSIONS (continued)	YES	NO	EXPLANATION (required if shaded box is checked)
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes cracks or settling imperfections less than 6 inches deep that extend less than 3 feet on the cover)? [minor repairs]		☒	If "yes", describe in Field conclusions/recommendations
4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 6 inches deep and 3 feet long) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]		☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
6. Field conclusions/recommendations: <u>The UR signs, fencing, and vegetative cover were in good condition. There was no evidence of new subsidence cracks or settling on the vegetative cover, since repairs were completed in Feb. 2011. No significant amount of animal burrows were discovered on the vegetative cover. Overall site conditions are great and do not warrant a follow-up corrective action.</u>			

F. CERTIFICATION

I have conducted an inspection of CAU 110, Area 3 WMD U-3ax/bl Crater, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/ Glenn Richardson Date: 3/9/11
 Printed Name: Glenn Richardson Title: Task Manager

Required Attachments:

1. Field Notes
2. Photos (or note File Location: S:\NTS\ER Share\Photos\CAU 110\2011\3-9-2011 Inspection)

Distribution: Original – Industrial Sites Project Manager
 Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/ Reed J. Poderis Date: 3/25/2011
 Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

Inspection Date and Time: 6/30/11 9:05AM

Reason for Inspection: Quarterly

Date of Last Post-Closure Inspection: 3/9/11

Reason for Last Post-Closure Inspection: Quarterly

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn Richardson

Title: Task Manager

Organization: Environmental Restoration

Assistant Inspector: Greg Doyle

Title: Sr. Scientist

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 91 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES NO EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

✓

2. Has the Post-Closure Permit application been reviewed?

✓

3. Has the Post-Closure Plan been reviewed?

✓

4. Have the site as-built plans and site base map been reviewed?

✓

5. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

✓

b. Was maintenance performed?

✓

6. Have the site maintenance and repair records been reviewed?

✓

a. If so, has site repair resulted in a change from as-built conditions?

✓

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

✓

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

D. SITE INSPECTION

- The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist. The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Is there damage to or a break in the chicken wire fence?		✓	
c. Have any fenceposts been damaged or their anchoring weakened?		✓	
d. Is the gate intact and functional?	✓		
e. Does the gate show evidence of tampering or damage?		✓	
f. Was the gate locked?	✓		
g. Are any of the use restriction signs damaged or missing?		✓	
h. Are all use restriction signs legible?		✓	2 signs are faded
i. How many use restriction signs need to be replaced?		2	
3. Waste unit cover (Western portion, "ax"):	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is there a change or difference in vegetation (i.e., is the vegetation growing on the cover inconsistent with the naturally-occurring vegetation growing outside of the unit)?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

	YES	NO	EXPLANATION
4. Waste unit cover (Eastern portion, "bl"): Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.			
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is there a change or difference in vegetation (i.e., is the vegetation growing on the cover inconsistent with the naturally-occurring vegetation growing outside of the unit)?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA
5. Subsidence survey markers and TDR Probes:			
	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have any of the seven (7) subsidence survey markers been disturbed?		✓	
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓	
c. Is there excessive vegetation around the subsidence survey markers?		✓	
d. Is there any evidence that TDR probes have been disturbed or the wires damaged?		✓	
e. Other?		✓	NA
6. Photograph Instructions:			
<ul style="list-style-type: none"> A standard set of eight (8) color photographs is required to be taken during each inspection of CAU 110: <ul style="list-style-type: none"> Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W) Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W). In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. Additional photographs may also be taken. A photograph log entry will be made for each photograph taken. 			
7. Photograph Documentation:			
	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have all photographs been taken as required by the photograph instructions?	✓		
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?		10	
d. Other?	✓		NA Additional photos were taken to document condition of re-planted vegetation areas and faded text on UR signs.
E. FIELD CONCLUSIONS			
	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

E. FIELD CONCLUSIONS (continued)	YES	NO	EXPLANATION (required if shaded box is checked)
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes cracks or settling imperfections less than 6 inches deep that extend less than 3 feet on the cover)? [minor repairs]	✓		If "yes", describe in Field conclusions/recommendations
4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 6 inches deep and 3 feet long) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
6. Field conclusions/recommendations: <i>The fencing, surface monuments, and vegetative cover are in great condition. The UR signage is intact, but noticed a couple of signs with faded text that needs to be replaced. There was no evidence of new subsidence or settling on the vegetative cover. The subsidence repairs that were completed in Feb. 2011 remain stable and in good condition.</i>			

F. CERTIFICATION

I have conducted an inspection of CAU 110, Area 3 WMD U-3ax/bl Crater, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: */s/ Glenn Richardson* Date: *6/30/11*
 Printed Name: *Glenn Richardson* Title: *Task Manager*

Required Attachments:

- Field Notes
- Photos (or note File Location: *S:\NTS\ER Share\Photos\CAU 110\2011\6-30-2011 CAU 110 Inspection*)

Distribution: Original – Industrial Sites Project Manager
 Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: */s/ Reed J. Poderis* Date: *7/27/11*
 Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

Inspection Date and Time: 9/13/11 10:00 AM

Reason for Inspection: QUARTERLY

Date of Last Post-Closure Inspection: 6/30/11

Reason for Last Post-Closure Inspection: QUARTERLY

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Rebecca King

Title: PROJECT MGR

Organization: Environmental Restoration

Assistant Inspector: Jim TRAYNOR

Title: PROJECT MGR

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 91 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES NO EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

✓

2. Has the Post-Closure Permit application been reviewed?

✓

3. Has the Post-Closure Plan been reviewed?

✓

4. Have the site as-built plans and site base map been reviewed?

✓

5. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

✓

b. Was maintenance performed?

✓

Replaced 2 signs on 7/20/11

6. Have the site maintenance and repair records been reviewed?

✓

a. If so, has site repair resulted in a change from as-built conditions?

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Is there damage to or a break in the chicken wire fence?		✓	
c. Have any fenceposts been damaged or their anchoring weakened?		✓	
d. Is the gate intact and functional?	✓		
e. Does the gate show evidence of tampering or damage?		✓	
f. Was the gate locked?	✓		
g. Are any of the use restriction signs damaged or missing?		✓	
h. Are all use restriction signs legible?	✓		
i. How many use restriction signs need to be replaced?		0	
3. Waste unit cover (Western portion, "ax"):	YES	NO	EXPLANATION { Required if shaded box is checked. If checked, specify dimensions, quantity, and/or other information to describe conditions.
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is there a change or difference in vegetation (i.e., is the vegetation growing on the cover inconsistent with the naturally-occurring vegetation growing outside of the unit)?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

	YES	NO	EXPLANATION
<div> 4. Waste unit cover (Eastern portion, "bl"): </div>			
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?	✓		Animal burrow on eastern side on slope (off the cover)
g. Is there a change or difference in vegetation (i.e., is the vegetation growing on the cover inconsistent with the naturally-occurring vegetation growing outside of the unit)?		✓	
h. Other (including trash, debris, etc within fenced area)?		✓	NA
<div> 5. Subsidence survey markers and TDR Probes: </div>			
a. Have any of the seven (7) subsidence survey markers been disturbed?		✓	
b. Do natural processes threaten the integrity of any subsidence survey marker?		✓	
c. Is there excessive vegetation around the subsidence survey markers?		✓	
d. Is there any evidence that TDR probes have been disturbed or the wires damaged?		✓	
e. Other?			NA
<div> 6. Photograph Instructions: <ul style="list-style-type: none"> A standard set of eight (8) color photographs is required to be taken during each inspection of CAU 110: <ul style="list-style-type: none"> Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W) Four (4) of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W). In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. Additional photographs may also be taken. A photograph log entry will be made for each photograph taken. </div>			
<div> 7. Photograph Documentation: </div>			
a. Have all photographs been taken as required by the photograph instructions?	✓		
b. Has a photograph log been prepared?	✓		
c. How many photographs were taken?		14	
d. Other?			NA
<div> E. FIELD CONCLUSIONS </div>			
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		

POST-CLOSURE INSPECTION CHECKLIST

CAU 110: AREA 3 WMD U-3ax/bl CRATER - CAS 03-23-04: U-3axbl Subsidence Crater

E. FIELD CONCLUSIONS (continued)	YES	NO	EXPLANATION (required if shaded box is checked)
3. Are general housekeeping (i.e., "minor") maintenance/repair actions needed (includes cracks or settling imperfections less than 6 inches deep that extend less than 3 feet on the cover)? [minor repairs]	☒		If "yes", describe in Field conclusions/recommendations
4. Are there any deficiencies that require a remedy other than general housekeeping or small (less than 6 inches deep and 3 feet long) cracks or settling imperfections of the cover? [i.e., more than "minor repairs"]		☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		☒	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
6. Field conclusions/recommendations: <u>UR and Radiological signage, and perimeter fencing are in good condition. Vegetation on the cover appears well established and stable. Considerable small animal burrowing present on eastern slope - mostly off the cover. Backfilling burrows is recommended. Chicken wire fence around repaired subsidence on east cover needs repair. No indication of cracking or subsidence of cover. Repairs are required within 60 days.</u>			

F. CERTIFICATION

I have conducted an inspection of CAU 110, Area 3 WMD U-3ax/bl Crater, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: /s/: Rebecca King

Date: 9/13/11

Printed Name: Rebecca King

Title: Project Manager

Required Attachments:

- Field Notes
- Photos (or note File Location: S:\NTS\ER Share\Photos\CAU110\2011\09-13-2011 CAU 110 Inspection

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis

Date: 9/15/11

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

CORRECTIVE ACTION UNIT 112 INSPECTION CHECKLISTS

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POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

Inspection Date and Time: 12/7/10 12:05 PM Reason for Inspection: Quarterly

Date of Last Post-Closure Inspection: 9/8/10 Reason for Last Post-Closure Inspection: Quarterly

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn Richardson Title: Task Manager Organization: Environmental Restoration

Assistant Inspector: Dudley Emer Title: Sr. Scientist Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

	YES	NO	EXPLANATION (required if shaded box is checked)
1. Has the Post-Closure Permit been reviewed?	☒	☐	
2. Has the Post-Closure Permit application been reviewed?	☒	☐	
3. Has the Post-Closure Plan been reviewed?	☒	☐	
4. Have the site as-built plans and site base map been reviewed?	☒	☐	
5. Have the previous inspection reports been reviewed?	☒	☐	
a. Were anomalies or trends detected on previous inspections?	☐	☒	
b. Was maintenance performed?	☐	☒	
6. Have the site maintenance and repair records been reviewed?	☒	☐	
a. If so, has site repair resulted in a change from as-built conditions?	☐	☒	NA
b. If yes (to 6a), are revised as-built plans available that reflect repair changes?	☐	☐	NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs (East Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fenceposts been damaged or their anchoring weakened?		✓	
c. Is the gate intact and functional?	✓		
d. Does the gate show evidence of tampering or damage?		✓	
e. Was the gate locked?	✓		
f. Are any of the use restriction signs damaged or missing?		✓	
g. Are all use restriction signs legible?	✓		
h. How many use restriction signs need to be replaced?		0	
i. Other?		✓	NA
3. Monuments:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have landfill monuments been disturbed?		✓	
b. Do natural processes threaten the integrity of any landfill monuments?		✓	
c. Is there excessive vegetation around the landfill monuments?		✓	
d. Other?		✓	NA
4. Neutron Access Pads:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have neutron access pads been disturbed?		✓	
b. Are well covers for neutron access tubes broken, lost, or otherwise damaged?		✓	
c. Other?		✓	NA

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

5. Waste unit cover:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?		✓	
h. Is there any obvious damage to the cover or plastic liner?		✓	
i. Other (including trash, debris, etc within fenced area)?		✓	NA

6. Photograph Instructions:

- Photographs should be taken to document maintenance/repair needs at the site. These will be used to plan maintenance/repair activities and are not intended for use in the post-closure annual report.
- Anomalous features or new features (such as changes in adjacent area land use) should be photographed.
- Other photographs are optional.
- A photograph log entry will be made for each photograph taken.

7. Photograph Documentation:	YES	NO	EXPLANATION
a. Have photographs been taken of the site?		✓	Not required.
If yes, how many photos were taken?		~	N/A
If yes, has a photographic log been prepared?		✓	N/A

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		
3. Is other maintenance/repair necessary?		✓	If yes, describe below
4. Is there obvious damage to the cover or plastic liner?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

6. Field conclusions/recommendations: *Overall site conditions are great. There is no evidence of settling or subsidence on the rip-rap cover. The UR signage and fencing are in excellent condition. No physical damage to the aboveground monuments. This site has no follow-up actions.*

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

E. FIELD CONCLUSIONS (continued)

6. Field conclusions/recommendations (continued):

F. CERTIFICATION

I have conducted an inspection of CAU 112, Area 23 Hazardous Waste Trenches, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, and field notes.

Chief Inspector's Signature: /s/: Glenn Richardson

Date: 12/7/10

Printed Name: Glenn Richardson

Title: Task Manager

Required Attachments:

1. Field Notes (if any)

2. Photos (or note File Location: S:\NTS\ER Share\ N/A)

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis

Date: 12/16/2010

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

POST-CLOSURE INSPECTION CHECKLIST**CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)**Inspection Date and Time: **3/9/11 11:35 AM**Reason for Inspection: **Quarterly**Date of Last Post-Closure Inspection: **12/7/10**Reason for Last Post-Closure Inspection: **Quarterly**

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: **Glenn Richardson**Title: **Task Manager**

Organization: Environmental Restoration

Assistant Inspector: **Dudley Emer**Title: **Sr. Scientist**

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES NO EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

✓

2. Has the Post-Closure Permit application been reviewed?

✓

3. Has the Post-Closure Plan been reviewed?

✓

4. Have the site as-built plans and site base map been reviewed?

✓

5. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

✓

b. Was maintenance performed?

✓

6. Have the site maintenance and repair records been reviewed?

✓

a. If so, has site repair resulted in a change from as-built conditions?

✓

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

✓

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

D. SITE INSPECTION

- The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist. The checklist should be completed during the site inspection.*
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs (East Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fenceposts been damaged or their anchoring weakened?		✓	
c. Is the gate intact and functional?	✓		
d. Does the gate show evidence of tampering or damage?		✓	
e. Was the gate locked?	✓		
f. Are any of the use restriction signs damaged or missing?		✓	
g. Are all use restriction signs legible?	✓		
h. How many use restriction signs need to be replaced?		0	
i. Other?			NA ✓
3. Monuments:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have landfill monuments been disturbed?		✓	
b. Do natural processes threaten the integrity of any landfill monuments?		✓	
c. Is there excessive vegetation around the landfill monuments?		✓	
d. Other?			NA ✓
4. Neutron Access Pads:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have neutron access pads been disturbed?		✓	
b. Are well covers for neutron access tubes broken, lost, or otherwise damaged?		✓	
c. Other?			NA ✓

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

5. Waste unit cover:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?		✓	
h. Is there any obvious damage to the cover or plastic liner?		✓	
i. Other (including trash, debris, etc within fenced area)?		✓	NA

6. Photograph Instructions:

- Photographs should be taken to document maintenance/repair needs at the site. These will be used to plan maintenance/repair activities and are not intended for use in the post-closure annual report.
- Anomalous features or new features (such as changes in adjacent area land use) should be photographed.
- Other photographs are optional.
- A photograph log entry will be made for each photograph taken.

7. Photograph Documentation:	YES	NO	EXPLANATION
a. Have photographs been taken of the site?		✓	Not required at this site.
If yes, how many photos were taken?		—	N/A
If yes, has a photographic log been prepared?		✓	N/A

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		
3. Is other maintenance/repair necessary?		✓	If yes, describe below
4. Is there obvious damage to the cover or plastic liner?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

6. Field conclusions/recommendations: The use restriction signs, fencing, and aboveground monuments are in great condition. There is no evidence of settling or subsidence on the rip rap cover. Also, there is no vegetation along the edges or on top of the rip rap cover. This site has no issues or concerns.

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

E. FIELD CONCLUSIONS (continued)

6. Field conclusions/recommendations (continued):

F. CERTIFICATION

I have conducted an inspection of CAU 112, Area 23 Hazardous Waste Trenches, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, and field notes.

Chief Inspector's Signature: /s/: Glenn Richardson

Date: 3/9/11

Printed Name: Glenn Richardson

Title: Task Manager

Required Attachments:

1. Field Notes (if any)

2. Photos (or note File Location: S:\NTS\ER Share\ N/A)

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis

Date: 3/25/2011

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

Inspection Date and Time: 6/29/11 12:25 PM

Reason for Inspection: Quarterly

Date of Last Post-Closure Inspection: 3/9/11

Reason for Last Post-Closure Inspection: Quarterly

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Glenn Richardson

Title: Task Manager

Organization: Environmental Restoration

Assistant Inspector: None

Title: —

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

	YES	NO	EXPLANATION (required if shaded box is checked)
1. Has the Post-Closure Permit been reviewed?	☒	☐	
2. Has the Post-Closure Permit application been reviewed?	☒	☐	
3. Has the Post-Closure Plan been reviewed?	☒	☐	
4. Have the site as-built plans and site base map been reviewed?	☒	☐	
5. Have the previous inspection reports been reviewed?	☒	☐	
a. Were anomalies or trends detected on previous inspections?	☐	☒	
b. Was maintenance performed?	☐	☒	
6. Have the site maintenance and repair records been reviewed?	☒	☐	
a. If so, has site repair resulted in a change from as-built conditions?	☐	☒	NA
b. If yes (to 6a), are revised as-built plans available that reflect repair changes?	☐	☐	NA ☒

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)
D. SITE INSPECTION

- The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist. The checklist should be completed during the site inspection.*
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		✓	
2. Fences, gates, and signs (East Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		✓	
b. Have any fenceposts been damaged or their anchoring weakened?		✓	
c. Is the gate intact and functional?	✓		
d. Does the gate show evidence of tampering or damage?		✓	
e. Was the gate locked?	✓		
f. Are any of the use restriction signs damaged or missing?		✓	
g. Are all use restriction signs legible?	✓		
h. How many use restriction signs need to be replaced?		0	
i. Other?			NA ✓
3. Monuments:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have landfill monuments been disturbed?		✓	
b. Do natural processes threaten the integrity of any landfill monuments?		✓	
c. Is there excessive vegetation around the landfill monuments?		✓	
d. Other?			NA ✓
4. Neutron Access Pads:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have neutron access pads been disturbed?		✓	
b. Are well covers for neutron access tubes broken, lost, or otherwise damaged?		✓	
c. Other?			NA ✓

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

5. Waste unit cover:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?	✓		New vegetation was discovered on the rip-rap cover.
h. Is there any obvious damage to the cover or plastic liner?		✓	
i. Other (including trash, debris, etc within fenced area)?		✓	NA

6. Photograph Instructions:

- Photographs should be taken to document maintenance/repair needs at the site. These will be used to plan maintenance/repair activities and are not intended for use in the post-closure annual report.
- Anomalous features or new features (such as changes in adjacent area land use) should be photographed.
- Other photographs are optional.
- A photograph log entry will be made for each photograph taken.

7. Photograph Documentation:	YES	NO	EXPLANATION
a. Have photographs been taken of the site?	✓		
If yes, how many photos were taken?		4	
If yes, has a photographic log been prepared?	✓		

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		
3. Is other maintenance/repair necessary?		✓	If yes, describe below
4. Is there obvious damage to the cover or plastic liner?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

6. Field conclusions/recommendations: The UR signage, fencing, and aboveground monuments are in good condition. There was evidence of new vegetation on top of the rip-rap cover. The vegetation will be removed and an herbicide application will be used, if necessary.

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

E. FIELD CONCLUSIONS (continued)

6. Field conclusions/recommendations (continued):

F. CERTIFICATION

I have conducted an inspection of CAU 112, Area 23 Hazardous Waste Trenches, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, and field notes.

Chief Inspector's Signature: /s/: Glenn Richardson Date: 6/29/11

Printed Name: <u>Glenn Richardson</u>	Title: <u>Task Manager</u>
Required Attachments:	

Required Attachments:

2. Photos (or note File Location: S:\NTS\ER Share\Photos\CAU 112\2011\6-29-2011 CAU 112 Inspection

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis Date: 7/27/11

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

Inspection Date and Time: 9/13/11 1:10 pm

Reason for Inspection: Quarterly

Date of Last Post-Closure Inspection: 6/29/11

Reason for Last Post-Closure Inspection: Quarterly

Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada

Responsible Facility Owner: Thomas A. Thiele, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Rebecca King

Title: PROJECT MGR

Organization: Environmental Restoration

Assistant Inspector: Jim TRAYNOR

Title: PROJECT MGR

Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

- Complete all checklist items.
- If a SHADED BOX is checked, provide detailed information regarding what was found and/or appropriate references to other documents that have the information (e.g., Maintenance Order Form for CAU 92 dated 2/15/2008).
- All documentation must be legible and clear.

B. PREPARATION (To be completed prior to site visit)

YES

NO

EXPLANATION (required if shaded box is checked)

1. Has the Post-Closure Permit been reviewed?

✓

2. Has the Post-Closure Permit application been reviewed?

✓

3. Has the Post-Closure Plan been reviewed?

✓

4. Have the site as-built plans and site base map been reviewed?

✓

5. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

✓

b. Was maintenance performed?

✓

Vegetation was removed on 7/18/11 and herbicide applied

6. Have the site maintenance and repair records been reviewed?

✓

a. If so, has site repair resulted in a change from as-built conditions?

✓

NA

b. If yes (to 6a), are revised as-built plans available that reflect repair changes?

✓

NA

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- Camera, digital storage drive, and extra batteries
- Keys to locks
- Clipboard
- Tape measure
- Radio, pager, etc.
- Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- Other miscellaneous support equipment

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)
D. SITE INSPECTION

- *The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.* The checklist should be completed during the site inspection.
- If a shaded box is checked, add detailed comments to document the results of the site inspection. Information provided should be of sufficient detail to enable reconstruction of observations regarding field conditions. Information can take the form of written narrative, sketches, measurements, and annotated site maps, all of which should be placed on additional attachments (if needed) and cross-reference appropriately. Attach the additional pages and number all pages upon completion of the inspection. The completed checklist is part of the field record of the inspection.
- Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes, and additional field notes are not required if the checklist and associated attachments adequately describe site conditions.

1. Adjacent off-site features:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?		☒	
2. Fences, gates, and signs (East Fenced Enclosure):	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there damage to or a break in the fence?		☒	
b. Have any fenceposts been damaged or their anchoring weakened?		☒	
c. Is the gate intact and functional?	☒		
d. Does the gate show evidence of tampering or damage?		☒	
e. Was the gate locked?	☒		
f. Are any of the use restriction signs damaged or missing?		☒	
g. Are all use restriction signs legible?	☒		
h. How many use restriction signs need to be replaced?		0	
i. Other?			NA ☒
3. Monuments:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have landfill monuments been disturbed?		☒	
b. Do natural processes threaten the integrity of any landfill monuments?		☒	
c. Is there excessive vegetation around the landfill monuments?		☒	
d. Other?			NA ☒
4. Neutron Access Pads:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Have neutron access pads been disturbed?		☒	
b. Are well covers for neutron access tubes broken, lost, or otherwise damaged?		☒	
c. Other?			NA ☒

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

5. Waste unit cover:	YES	NO	EXPLANATION (required if shaded box is checked)
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of human intrusion onto the cover?		✓	
e. Is there evidence of large animal intrusion onto the cover?		✓	
f. Is there evidence of animal burrowing?		✓	
g. Is vegetation growing on the cover?	✓		Minimal vegetation on cover -
h. Is there any obvious damage to the cover or plastic liner?		✓	
i. Other (including trash, debris, etc within fenced area)?	✓		NA Small amount of wind blown debris

6. Photograph Instructions:

- Photographs should be taken to document maintenance/repair needs at the site. These will be used to plan maintenance/repair activities and are not intended for use in the post-closure annual report.
- Anomalous features or new features (such as changes in adjacent area land use) should be photographed.
- Other photographs are optional.
- A photograph log entry will be made for each photograph taken.

7. Photograph Documentation:

	YES	NO	EXPLANATION
a. Have photographs been taken of the site?		✓	N/A
If yes, how many photos were taken?	—		
If yes, has a photographic log been prepared?		✓	N/A

E. FIELD CONCLUSIONS	YES	NO	EXPLANATION (required if shaded box is checked)
1. Are more frequent inspections required?		✓	
2. Are existing maintenance/repair actions satisfactory?	✓		
3. Is other maintenance/repair necessary?		✓	If yes, describe below
4. Is there obvious damage to the cover or plastic liner?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)
5. Will necessary repairs change the as-built condition of the unit?		✓	If "yes", describe below and the Task Manager must complete the "Follow-up Actions" (not part of checklist)

6. Field conclusions/recommendations: Use restriction signage and fencing are in excellent condition. There was no evidence of settling or subsidence of cover. Minor vegetation on cover and slope. Above ground monuments in good condition. Small amount of wind blown sanitary debris will be removed.

POST-CLOSURE INSPECTION CHECKLIST

CAU 112: AREA 23 HAZARDOUS WASTE TRENCHES - CAS 23-21-02: Area 23 Haz. Waste Trenches (RCRA)

E. FIELD CONCLUSIONS (continued)

6. Field conclusions/recommendations (continued):

F. CERTIFICATION

I have conducted an inspection of CAU 112, Area 23 Hazardous Waste Trenches, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, and field notes.

Chief Inspector's Signature: /s/: Rebecca King

Date: 9/13/11

Printed Name: Rebecca King

Title: PROJECT MANAGER

Required Attachments:

1. Field Notes (if any)
2. Photos (or note File Location: S:\NTS\ER Share_____)

Distribution: Original – Industrial Sites Project Manager
Copy – Task Manager

G. VERIFICATION

I have reviewed this checklist and attachments and have verified that it is complete.

Signature: /s/: Reed J. Poderis

Date: 9/15/2011

Printed Name: Thomas A. Thiele (or designee)

Distribution: Original – Task Manager

APPENDIX B

FIELD NOTES

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DECEMBER 7, 2010

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Work continued from Page _____

RCRA Post Closure Inspections -

12/7/10

Personnel: Tiffany Lantow (NNSA)
 Ted Zafaratos (NDEP)
 Glenn Richardson (NSTec) - Task Mgr.
 Dudley Emer (NSTec) - Sr. Scientist

Scope: Perform quarterly post closure site inspections at CAUs: 92, 110, and 112.
 Perform semi-annual post closure site inspections at CAU 90.

PPE: Standard Level D (No hard hats required)

Weather: Low-Mid 50s, Sunny, Partly Cloudy

Equipment: Digital Camera

9:10 AM Departing from Mercury in route to Area 2 Bitcutter (CAU 90).

9:55 AM Arrived @ CAU 90 Bitcutter site and held a brief tailgate safety meeting to discuss common OSHA hazards (slips/trips/falls, etc.), cold stress conditions, maintaining use of buddy system, radiological hazards, and biological hazards.

10:05 AM Performed the site inspection @ CAU 90 to confirm the UR signage, fencing, and concrete monument pads were in great condition. There was no evidence animal burrowing, settling, or subsidence on the soil covers. Also, there was no vegetation within the chain-link fenced area or around the concrete pads. Photo documentation was taken as required.
 There are no issues or concerns @ CAU 90.

10:30 AM Arrived @ CAU 110 Area 3 U3ax/bl to perform a site inspection. Radiological hazards associated with URMAs were reviewed prior to accessing the landfill site. Inspection results confirmed that the

UR signage, radiological postings, and fencing were in good condition. There was a small breach on the south side of the inner perimeter fence that was noticed which is in need of repair. The minor fence repair will be completed within 60 days. There was no evidence of new cracks or settling on the vegetative cover. Fortunately, the subsidence repairs that were completed in Jan. 2010 continue to be well-maintained and in good condition. The surface monuments show no evidence of physical damage. The vegetation on the cover appears to be maturing well, especially the new vegetation that was replanted on the east portion of the cover. Also, there were only a couple of animal burrows noticed on the cover, but nothing was significant to warrant a follow-up action. Photo documentation was taken as required, but the minor fence repair is the only corrective action necessary.

11:25 AM Arrived @ CAU 92 Area 6 Decon Pond to perform a site inspection. The UR signage and chain-link fencing are in excellent condition. Standing water was noticed inside the fence along the north edge of the cover, but was not seen on the actual cover. There was no evidence of vegetation along the edges or on top of the cover. Also, there was no animal burrowing, settling, or subsidence noticed on the cover. The surface concrete monuments and wave barriers show no indication of physical damage. Photo documentation was taken as required. There are no follow-up actions necessary at this site.

12:05 PM Arrived @ CAU 112 Area 23 Hazardous Waste Trenches to perform a site inspection. The UR signage, fencing, aboveground monuments, and rip rap cover are in good condition. There is no evidence of new vegetation on top or along the sides of the cover. This site has no issues or concerns.

MARCH 9, 2011

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RCRA Inspections - Post Closure

3/9/11

Personnel: Tiffany Lantow (NNSA)
Ted Zaferatos (NDEP)
Glenn Richardson (NSTec) - Task Manager
Dudley Emer (NSTec) - Sr. Scientist

Scope: Perform quarterly post closure site inspections at CAUs: 92, 110, & 112.
Perform semi-annual post closure site inspections at CAU 91.

Weather: Low 60s, Sunny, Clear Skies

Equipment: Digital Camera

PPE: Standard Level D (No hard hats required)

9:05AM Departing from Mercury in route to Area 3 U3fi Injection Well (CAU 91)

9:45AM Arrived @ CAU 91 U3fi Injection Well and conducted a brief tailgate safety meeting. The discussions included: common OSHA hazards such as slips, trips, & falls, and environmental hazards. Maintain use of the buddy system and beware of radiological and biological hazards. In case of emergency, report to Area 6 Fire Station.

9:50AM We performed a site inspection @ CAU 91 to confirm that the UR signage and chainlink fencing remain in great condition. There was no vegetation growth on the cover or around the concrete pads. Also, there was no evidence of subsidence or settling on the cover. This site has no issues or concerns. Photos were taken as required.

10:00AM Arrived @ CAU 110 U-3ax/b1 and performed a site inspection. Radiological hazards associated with URMAs were reviewed prior to accessing the landfill cover. The vegetation on the cover appeared to be in good condition.

3/9/11

5 The surface grade monuments, UR signage, radiological postings, and fencing are in great condition. Fence repairs that were completed in Jan. 2011 remain intact. The subsidence repairs that were completed in Feb. 2011 remain good and there is no evidence of new subsidence cracks or settling. The # of animal burrows on the cover has reduced significantly. Photos of the central interior and external perimeter were taken as required. Progress of the growth rate of the new vegetation re-planted on the east portion of the cover will be evaluated before the next inspection period.

10 This site has no issues warranting a follow-up corrective action.

10:52 AM Arrived @ CAU 92 Area 6 Decon Pond to perform a site inspection.

15 The UR signage, surface grade monuments, and chain link fencing remain in great condition. There is no evidence of physical damage to the wave barriers. No vegetation was noticed on top or along the edges of the cover. Also, there was no visible evidence of subsidence or settling. Photo documentation was taken as required. Overall site conditions warrant no follow-up corrective action.

20 11:35 AM Arrived @ CAU 112 Area 23 Hazardous Waste Trenches to perform a site inspection. The UR signage, barb-wire fencing, and aboveground concrete monuments are in excellent condition. There is no evidence of vegetation along the edges and on top of the rip-rap cover. There are no follow-up actions required at this site.

25 11:50 AM

End of RCRA Inspections

3/9/11

/s/: Glenn Richardson

JUNE 29–30, 2011

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RCRA Post Closure Inspections

6/29/11

Personnel: Tiffany Lantow - (NSO)

Ted Zaferatos - (NDEP)

5 Glenn Richardson - (NSTec) Task Manager

Greg Doyle - (NSTec) Sr. Scientist (Only @ CAU 110 U-3ax/b1)

Scope: Perform quarterly post closure site inspections at CAUs: 92, 110, and 112.

Perform semi-annual post closure site inspections at CAU 90.

10 Equipment: Digital Camera

PPE: Standard Level D (No hard hats required)

Weather: Mid 90s, Sunny, Very Windy

9:00 AM Departing from Mercury in route to Area 2 Bitcutter (CAU 90)

15 9:45 AM Arrived @ CAU 90 Bitcutter and conducted a brief tailgate safety meeting. Discussion topics included: OSHA general hazards (slips/trips/falls), radiological, biological, and environmental hazards. Area 6 Fire Station is the emergency location site for response.

20 9:50 AM We performed a site inspection @ CAU 90 to confirm that UR signage and chain-link fencing remain in great condition. There was no evidence of vegetation growth on the cover or near the concrete pads. However, animal intrusion was noticed with the evidence of animal burrows at the East Fence enclosure (postshot well site). It appears to be a small critter, but access into the fenced area to ^{be way in} apply backfill the small burrows is necessary. There was no settling or subsidence. Photo documentation was taken as required.

25 10:20 AM Arrived @ CAU 110 U-3ax/b1 to perform a site inspection. Wind speed conditions increased in Area 3. As a result, this caused problems

with visibility and presented a potentially unsafe condition for accessing the landfill cover with NSD and NDEP. Also, soil disturbing activities defined under 10 CFR 835 could potentially be compromised due to the extreme high winds and create an unsafe condition specifically because we were not accompanied by an RCT. The area is a URMA. After realizing the wind conditions were not going to improve, it was determined that the inspections @ CAU 110 need to be postponed and rescheduled. A tentative date was 6/30/11, pending weather conditions.

11:05 AM Arrived @ CAU 92 Area 6 Decon Pond to perform a site inspection.

Extreme high wind conditions continued and presented a potentially unsafe condition for accessing the soil cover with NSD and NDEP. As a result, it was determined to postpone this inspection and reschedule, tentatively on 6/30/11. As with CAU 110, external photos were taken outside the boundary fencing of CAU 92 from the govt. vehicle.

12:30 ^{PM RAK 11/9/11} Arrived @ CAU 112 Area 23 Hazardous Waste Trenches to perform a site inspection. Wind conditions were a lot better in Mercury than the forward ~~area~~ areas onsite. A drive-by inspection was performed to confirm UR signage, barb-wire fencing, and aboveground concrete monuments remain in great condition. There was evidence of vegetation growth on the riprap cover that needs to be removed. Also, vegetation was noticed on the edges and side slopes of the riprap cover. Vegetation removal is necessary. Photos were not required, but taken to document the follow-up action. Herbicide application might also be necessary.

12:40 ^{PM RAK 11/9/11} End of RCRA Inspections

/s/: Glenn Richardson

6/29/11

6/29/11

Continue RCRA Post Closure Inspections

6/30/11

Personnel: Glenn Richardson - (NSTec) Task Manager
Greg Doyle - (NSTec) Sr. Scientist (Only @ CAU 110 U-3ax/b1)

Scope: Resume quarterly post closure site inspections at CAUs: 110 and 92

Equipment: Digital Camera

PPE: Standard Level D (no hard hats required)

Weather: Mid 90s, Sunny, Light Winds

8:35 AM Departing Mercury in route to Area 3 U-3ax/b1 (CAU 110)

9:05 AM Met Greg Doyle to conduct a brief tailgate safety meeting and perform a site inspection. Weather conditions were a lot better than on 6/29/11. The site inspection confirmed that UR signage was intact, surface grade monuments, and fencing were in great condition. However, two UR signs on the south perimeter fence showed evidence of faded text. The two signs will need to be replaced. There was no evidence of new subsidence or settling on the cover. The vegetation on the cover appeared to be in good condition. Required photos on the cover were taken. External photos taken on 6/29/11 were verified.

10:35 AM Arrived @ CAU 92 Area 6 Decon Pond to perform a site inspection. The UR signage, radiological postings, chain-link fencing, and surface grade monuments are in great condition. There was evidence of new vegetation along all edges of the soil cover, but not on the actual top of the cover. Vegetation removal is necessary and probably herbicide application. There was no damage to the wave barriers.

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End of Inspections

Work continued to Page _____

SIGNATURE /s/ Glenn Richardson

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

6/30/11

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SEPTEMBER 13, 2011

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RCRA Post Closure Inspections

Personnel: Tiffany Lantow (NNSA)
Ted Zafaratas (NDEP)
Scott Page (NDEP)
Rebecca King (NSTec)
Jim Traynor (NSTec)

Scope: Perform quarterly post closure site inspections at
CAVS 92, 110, and 112. Perform semi-annual inspections
at CAV 91.

Equipment: Digital Camera

PPE: Standard Level D (No hard hats required)

Weather: Mid-80s, Partly cloudy, Light winds

0910 Departed Mercury in route to ~~Area 2 Bitterwater, CAV 90~~
Area 3 U3F₂ Injection Well.

10⁰⁰ Arrived at CAV 110 a/b1 to perform inspection. Conducted
safety briefing. General OSHA hazards. Ab Fine Static
closest medical. Outer gate in good repair. Chicken wire
fence encompassing repaired subsidence area on east side of cover
is drooping & should be considered for repair. Considerable
animal burrowing activities on east side of cover slope off of
main cover. This area should be monitored to ensure
animal burrowing is kept in check. No indication of
cracking or settling of cover. Interior & exterior photos
taken. Signs & fences in good condition. Vegetation on

cover in good condition.

10⁵⁰ Left U3ax/bl. Headed to CAV 547 Mullet.

11⁰⁵ Arrived at Mullet to observe cover construction.

Received safety briefing.

11²⁰ Left Mullet. Headed to U3Fc CAV 91.

11³⁵ Arrived at U3Fc CAV 91. Heavy vegetation on north end inside ~~cover~~^{fence}. Evidence of minor animal burrowing. No signs of subsidence. Interior and exterior photos taken. Signs + fences in good condition.

12⁰⁰ Left U3Fc. Headed to Decon Pond CAV 92.

12²⁰ Arrived at Decon Pond. Some repositioning of wave barrier required. Minor vegetation along edges of cover. No signs of subsidence. Interior and exterior photos taken. Some faded signs need replacing. Fences in good condition.

12⁴⁵ Left Decon Pond. Headed to A23 Hazardous Waste Trenches CAV 112. No sign of subsidence or standing water. Signs and Fence in good condition. Some minor vegetation growth near monitoring wells and very minor on cover. Minimal amount of garbage on cover (i.e. paper + plastic sanitary trash).

1³⁰ Left Decon Pond to Mercury.

APPENDIX C

PHOTOGRAPHS

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PHOTOGRAPH LOG

CORRECTIVE ACTION UNIT	DATE	PHOTOGRAPH NUMBER	DESCRIPTION
90	12/07/2010	1	West Unit Facing North
		2	West Unit Facing East
		3	West Unit Facing South
		4	East Unit Facing South
		5	East Unit Facing West
		6	East Unit Facing North
	06/29/2011	7	West Unit Facing North
		8	West Unit Facing East
		9	West Unit Facing South
		10	East Unit Facing South
		11	East Unit Facing North
91	03/09/2011	12	Inside Facing North
		13	Inside Facing East
		14	Inside Facing South
		15	Inside Facing West
		16	Surface Monument Facing North
		17	Surface Monitoring Well Facing South
		18	Outside Facing North
		19	Outside Facing East
		20	Outside Facing South
		21	Outside Facing West
	09/13/2011	22	Inside Facing North
		23	Inside Facing East
		24	Inside Facing South
		25	Inside Facing West
		26	Surface Monument Facing North
		27	Surface Monitoring Well Facing South
		28	Outside Facing North
		29	Outside Facing East
		30	Outside Facing South
		31	Outside Facing West

PHOTOGRAPH LOG, CONTINUED

CORRECTIVE ACTION UNIT	DATE	PHOTOGRAPH NUMBER	DESCRIPTION
92	12/07/2010	32	Inside Facing North
		33	Inside Facing East
		34	Inside Facing South
		35	Inside Facing West
		36	Outside Facing North
		37	Outside Facing East
		38	Outside Facing South
		39	Outside Facing West
	03/09/2011	40	Inside Facing North
		41	Inside Facing East
		42	Inside Facing South
		43	Inside Facing West
		44	Outside Facing North
		45	Outside Facing East
		46	Outside Facing South
		47	Outside Facing West
	06/30/2011	48	Inside Facing North
		49	Inside Facing East
		50	Inside Facing South
		51	Inside Facing West
		52	Outside Facing North
		53	Outside Facing East
		54	Outside Facing South
	09/13/2011	55	Inside Facing North
		56	Inside Facing East
		57	Inside Facing South
		58	Inside Facing West
		59	Outside Facing North
		60	Outside Facing East
		61	Outside Facing South
		62	Outside Facing West

PHOTOGRAPH LOG, CONTINUED

CORRECTIVE ACTION UNIT	DATE	PHOTOGRAPH NUMBER	DESCRIPTION
110	12/07/2010	63	Inside Facing North
		64	Inside Facing East
		65	Inside Facing South
		66	Inside Facing West
		67	Outside Facing North
		68	Outside Facing East
		69	Outside Facing South
		70	Outside Facing West
	03/09/2011	71	Inside Facing North
		72	Inside Facing East
		73	Inside Facing South
		74	Inside Facing West
		75	Outside Facing North
		76	Outside Facing East
		77	Outside Facing South
		78	Outside Facing West
	06/30/2011	79	Inside Facing North
		80	Inside Facing East
		81	Inside Facing West
		82	Outside Facing North
		83	Outside Facing East
		84	Outside Facing South
		85	Outside Facing West
	09/13/2011	86	Inside Facing North
		87	Inside Facing East
		88	Inside Facing South
		89	Inside Facing West
		90	Outside Facing North
		91	Outside Facing East
		92	Outside Facing South
		93	Outside Facing West

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Photograph 1: CAU 90, West Unit Facing North, 12/07/2010

Photograph 2: CAU 90, West Unit Facing East, 12/07/2010

Photograph 3: CAU 90, West Unit Facing South, 12/07/2010

Photograph 4: CAU 90, East Unit Facing South, 12/07/2010

Photograph 5: CAU 90, East Unit Facing West, 12/07/2010

Photograph 6: CAU 90, East Unit Facing North, 12/07/2010

Photograph 7: CAU 90, West Unit Facing North, 06/29/2011

Photograph 8: CAU 90, West Unit Facing East, 06/29/2011

Photograph 9: CAU 90, West Unit Facing South, 06/29/2011

Photograph 10: CAU 90, East Unit Facing South, 06/29/2011

Photograph 11: CAU 90, East Unit Facing North, 06/29/2011

Photograph 12: CAU 91, Inside Facing North, 03/09/2011

Photograph 13: CAU 91, Inside Facing East, 03/09/2011

Photograph 14: CAU 91, Inside Facing South, 03/09/2011

Photograph 15: CAU 91, Inside Facing West, 03/09/2011

Photograph 16: CAU 91, Surface Monument Facing North, 03/09/2011

Photograph 17: CAU 91, Surface Monitoring Well Facing South, 03/09/2011

Photograph 18: CAU 91, Outside Facing North, 03/09/2011

Photograph 19: CAU 91, Outside Facing East, 03/09/2011

Photograph 20: CAU 91, Outside Facing South, 03/09/2011

Photograph 21: CAU 91, Outside Facing West, 03/09/2011

Photograph 22: CAU 91, Inside Facing North, 09/13/2011

Photograph 23: CAU 91, Inside Facing East, 09/13/2011

Photograph 24: CAU 91, Inside Facing South, 09/13/2011

Photograph 25: CAU 91, Inside Facing West, 09/13/2011

Photograph 26: CAU 91, Surface Monument Facing North, 09/13/2011

Photograph 27: CAU 91, Surface Monitoring Well Facing South, 09/13/2011

Photograph 28: CAU 91, Outside Facing North, 09/13/2011

Photograph 29: CAU 91, Outside Facing East, 09/13/2011

Photograph 30: CAU 91, Outside Facing South, 09/13/2011

Photograph 31: CAU 91, Outside Facing West, 09/13/2011

Photograph 32: CAU 92, Inside Facing North, 12/07/2010

Photograph 33: CAU 92, Inside Facing East, 12/07/2010

Photograph 34: CAU 92, Inside Facing South, 12/07/2010

Photograph 35: CAU 92, Inside Facing West, 12/07/2010

Photograph 36: CAU 92, Outside Facing North, 12/07/2010

Photograph 37: CAU 92, Outside Facing East, 12/07/2010

Photograph 38: CAU 92, Outside Facing South, 12/07/2010

Photograph 39: CAU 92, Outside Facing West, 12/07/2010

Photograph 40: CAU 92, Inside Facing North, 03/09/2011

Photograph 41: CAU 92, Inside Facing East, 03/09/2011

Photograph 42: CAU 92, Inside Facing South, 03/09/2011

Photograph 43: CAU 92, Inside Facing West, 03/09/2011

Photograph 44: CAU 92, Outside Facing North, 03/09/2011

Photograph 45: CAU 92, Outside Facing East, 03/09/2011

Photograph 46: CAU 92, Outside Facing South, 03/09/2011

Photograph 47: CAU 92, Outside Facing West, 03/09/2011

Photograph 48: CAU 92, Inside Facing North, 06/30/2011

Photograph 49: CAU 92, Inside Facing East, 06/30/2011

Photograph 50: CAU 92, Inside Facing South, 06/30/2011

Photograph 51: CAU 92, Inside Facing West, 06/30/2011

Photograph 52: CAU 92, Outside Facing North, 06/30/2011

Photograph 53: CAU 92, Outside Facing East, 06/30/2011

Photograph 54: CAU 92, Outside Facing South, 06/30/2011

Photograph 55: CAU 92, Inside Facing North, 09/13/2011

Photograph 56: CAU 92, Inside Facing East, 09/13/2011

Photograph 57: CAU 92, Inside Facing South, 09/13/2011

Photograph 58: CAU 92, Inside Facing West, 09/13/2011

Photograph 59: CAU 92, Outside Facing North, 09/13/2011

Photograph 60: CAU 92, Outside Facing East, 09/13/2011

Photograph 61: CAU 92, Outside Facing South, 09/13/2011

Photograph 62: CAU 92, Outside Facing West, 09/13/2011

Photograph 63: CAU 110, Inside Facing North, 12/07/2010

Photograph 64: CAU 110, Inside Facing East, 12/07/2010

Photograph 65: CAU 110, Inside Facing South, 12/07/2010

Photograph 66: CAU 110, Inside Facing West, 12/07/2010

Photograph 67: CAU 110, Outside Facing North, 12/07/2010

Photograph 68: CAU 110, Outside Facing East, 12/07/2010

Photograph 69: CAU 110, Outside Facing South, 12/07/2010

Photograph 70: CAU 110, Outside Facing West, 12/07/2010

Photograph 71: CAU 110, Inside Facing North, 03/09/2011

Photograph 72: CAU 110, Inside Facing East, 03/09/2011

Photograph 73: CAU 110, Inside Facing South, 03/09/2011

Photograph 74: CAU 110, Inside Facing West, 03/09/2011

Photograph 75: CAU 110, Outside Facing North, 03/09/2011

Photograph 76: CAU 110, Outside Facing East, 03/09/2011

Photograph 77: CAU 110, Outside Facing South, 03/09/2011

Photograph 78: CAU 110, Outside Facing West, 03/09/2011

Photograph 79: CAU 110, Inside Facing North, 06/30/2011

Photograph 80: CAU 110, Inside Facing East, 06/30/2011

Photograph 81: CAU 110, Inside Facing West, 06/30/2011

Photograph 82: CAU 110, Outside Facing North, 06/30/2011

Photograph 83: CAU 110, Outside Facing East, 06/30/2011

Photograph 84: CAU 110, Outside Facing South, 06/30/2011

Photograph 85: CAU 110, Outside Facing West, 06/30/2011

Photograph 86: CAU 110, Inside Facing North, 09/13/2011

Photograph 87: CAU 110, Inside Facing East, 09/13/2011

Photograph 88: CAU 110, Inside Facing South, 09/13/2011

Photograph 89: CAU 110, Inside Facing West, 09/13/2011

Photograph 90: CAU 110, Outside Facing North, 09/13/2011

Photograph 91: CAU 110, Outside Facing East, 09/13/2011

Photograph 92: CAU 110, Outside Facing South, 09/13/2011

Photograph 93: CAU 110, Outside Facing West, 09/13/2011

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