



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

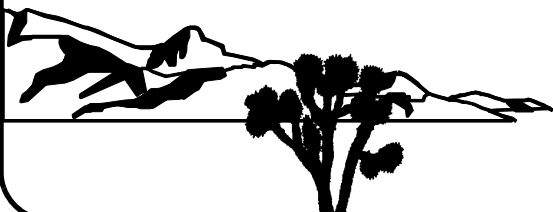
For Calendar Year 2016

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**POST-CLOSURE REPORT FOR CLOSED
RESOURCE CONSERVATION AND RECOVERY ACT
CORRECTIVE ACTION UNITS,
NEVADA NATIONAL SECURITY SITE, NEVADA
FOR CALENDAR YEAR 2016**

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

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

FOR CALENDAR YEAR 2016

Approved by: /s/ Tiffany A. Lantow

Date: 03/28/2017

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List of Acronyms and Abbreviations

| | |
|----------|--|
| CAS | Corrective action site |
| CAU | Corrective action unit |
| ft | Foot |
| FY | Fiscal year |
| in. | Inch |
| NAD | North American Datum |
| NDEP | Nevada Division of Environmental Protection |
| NNSA/NFO | U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office |
| NNSS | Nevada National Security Site |
| PPT | Precipitation |
| SM | Subsidence marker |
| TDR | Time-domain reflectometry |
| TRC | Tribal Revegetation Committee |
| UR | Use restriction |
| UTM | Universal Transverse Mercator |
| VWC | Volumetric water content |

Executive Summary

This report covers the reporting period calendar year 2016 and the fourth quarter of 2015 (October 2015 through December 2016). This change to the reporting periods (i.e., fiscal to calendar) is to gain efficiencies during report development and to better align with other environmental report schedules. 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 111, Area 5 WMD Retired Mixed Waste Pits
- CAU 112, Area 23 Hazardous Waste Trenches

The locations of the sites are shown in [Figure ES-1](#). The post-closure requirements for these sites are described in *Resource Conservation and Recovery Act* Permit Number NEV HW0101 and are summarized in each CAU-specific section in [Section 1.0](#) of this report. The results of the inspections, a summary of maintenance activities, and an evaluation of monitoring data are presented in this report.

Site inspections are conducted annually at CAUs 90, 91, and 112; semiannually at CAUs 92 and 110; and quarterly at CAU 111. Additional inspections are conducted at CAUs 92 and 111 if precipitation occurs in excess of 1.0 inch (in.) in a 24-hour period. Inspections include an evaluation of the condition of the units, including covers, fences, signs, gates, and locks.

At CAU 110, soil moisture monitoring, vegetation evaluations, and subsidence surveys are conducted in addition to the visual inspections. At CAU 111, soil moisture monitoring, vegetation evaluations, subsidence surveys, direct radiation monitoring, air monitoring, radon flux monitoring, and groundwater monitoring are conducted.

The results of the vegetation surveys at CAUs 110 and 111 and an analysis of the soil moisture monitoring data at CAU 110 are presented in this report. Results of additional monitoring at CAU 111 are documented annually in the *Nevada National Security Site Waste Management Monitoring Report Area 3 and Area 5 Radioactive Waste Management Sites* and in the *Nevada National Security Site*

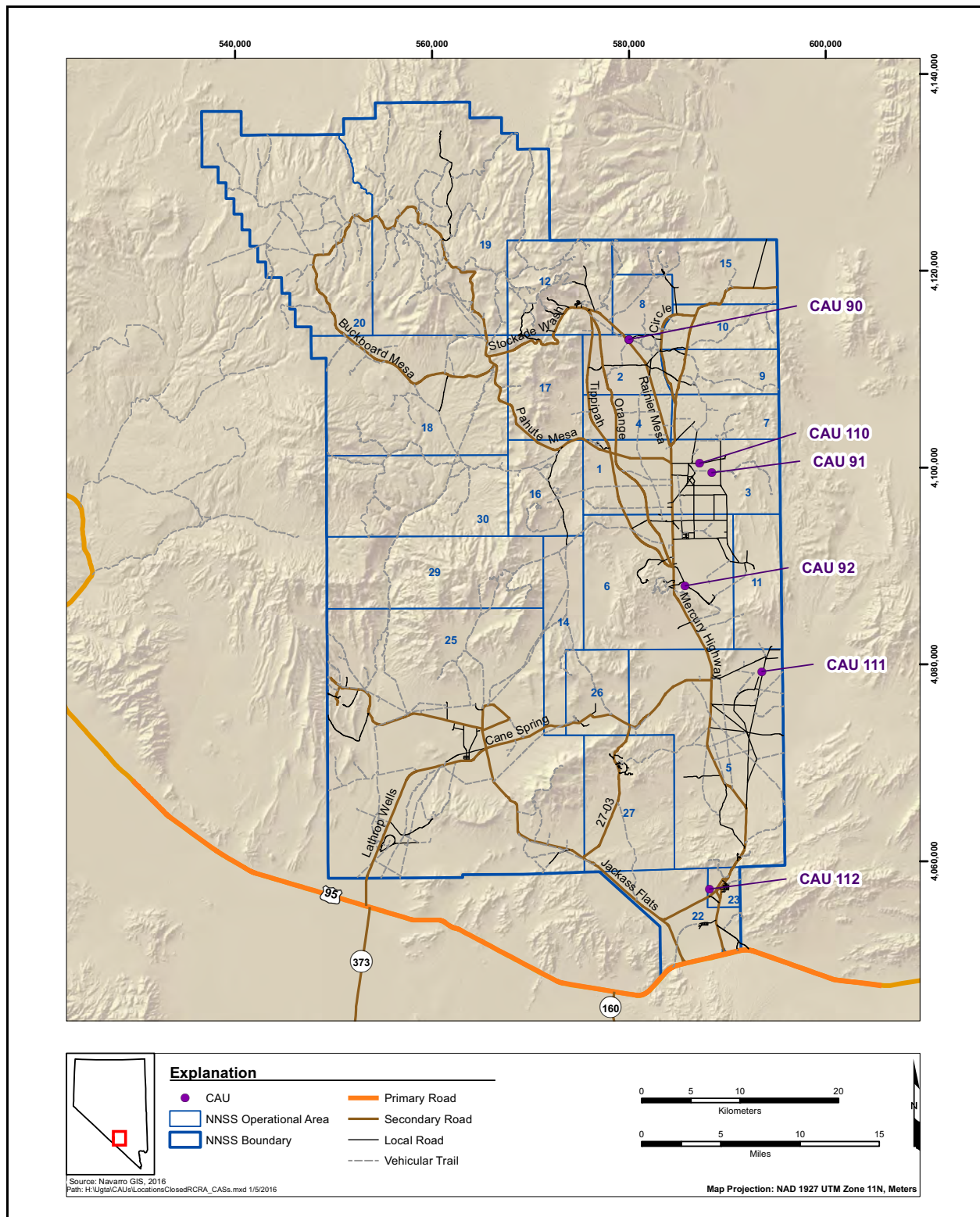


Figure ES-1
Locations of Closed Resource Conservation and Recovery Act CAUs

Data Report: Groundwater Monitoring Program Area 5 Radioactive Waste Management Site, which will be submitted under separate letterhead.

All required inspections, maintenance, and monitoring were conducted in accordance with the post-closure requirements of the permit.

Revision 4 of Permit NEV HW0101 was issued and implemented on December 10, 2015. This permit reduced the frequency of inspections to annual at CAUs 90, 91, and 112 and to semiannual at CAUs 92 and 110. Inspections at CAU 111 remain quarterly. Additionally, the rainfall precipitation threshold at CAU 92 has changed from 0.50 in. to 1.00 in.

1.0 Inspections, Repairs, and Maintenance

This report covers the reporting period calendar year 2016 and the fourth quarter of 2015 (October 2015 through December 2016). This change to the reporting periods (i.e., fiscal year to calendar year) is to gain efficiencies during report development and to better align with other environmental report schedules.

1.1 CAU 90, Area 2 Bitcutter Containment

1.1.1 Post-Closure Requirements

Annual inspection is required to evaluate the condition of the unit. Photographs are taken, and the results of the inspections 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 Inspections, Repairs, and Maintenance

Due to the lengthened reporting period for this document (i.e., Oct 2015 to Dec 2016), two scheduled inspections, were conducted. An annual inspection was performed on December 3, 2015. The site was visually inspected, and findings were recorded via checklists and photographs. Vegetation within the fenced enclosure of Corrective Action Site (CAS) 02-20-01, Bitcutter/PS Inj. Wells (3) (RCRA), should be removed. No other problems were observed. The vegetation within the fenced enclosure was removed on January 20, 2016. All maintenance and restoration actions were made in accordance with the permit.

An annual inspection was performed on December 8, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. No problems were observed, and no maintenance or repairs were required at either CAS (02-20-01, Bitcutter/PS Inj. Wells (3) (RCRA); or 02-20-03, Wastewater Pit). All maintenance and restoration actions were made in accordance with the permit.

1.2 CAU 91, Area 3 U-3fi Injection Well

1.2.1 Post-Closure Requirements

Annual inspection is required to evaluate the condition of the unit. Photographs are taken, and the results of the inspection are documented on a checklist. The permit does not specify a time limit for repairs at Corrective Action Unit (CAU) 91.

1.2.2 Inspections, Repairs, and Maintenance

The annual inspection was performed on June 23, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. Plants were noted growing on the cover. Herbicide was applied to the cover on October 4, 2016. All maintenance and restoration actions were made in accordance with the permit.

1.3 CAU 92, Area 6 Decon Pond Facility

1.3.1 Post-Closure Requirements

Inspections are required semiannually and when precipitation occurs in excess of 1.0 inches (in.) in a 24-hour period. Photographs are taken, and the results of the inspection are documented on a checklist. The checklist documents the reason for the inspection (i.e., semiannually 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 fence, warning signs, gate, and lock is documented. Small cracks or settling imperfections (less than 2 in. deep) are documented, and repairs are scheduled on an annual basis. Larger disruptions are immediately reported to NDEP and remedied within 60 days of discovery.

1.3.2 Inspections, Repairs, and Maintenance

Due to the lengthened reporting period for this document (i.e., Oct 2015 to Dec 2016), three scheduled inspections, and two precipitation inspections were conducted. A 1.70-in. rain event was recorded over the weekend of October 16, 17, and 18, 2015. On Monday, October 19, 2015, a rain event inspection was conducted. Small puddles were noted within the fenced area but not on the cover.

No erosion issues or other problems were observed. No maintenance or repairs were required. No photographs were taken during this rain event.

A scheduled inspection was performed on December 3, 2015. The site was visually inspected, and findings were recorded via checklists and photographs. No problems were observed, and no maintenance or repairs were required.

On Friday, December 11, 2015, 0.52 in. of precipitation was recorded. On Monday, December 14, 2015, a rain event inspection was conducted. The inspection was conducted, although not required, to provide continuity between the former permit requirements and the new permit requirements. A small amount of standing water was observed within the fence line and near the northwest corner of the site. This small amount of water was not on the landfill cap. The amount and location of the standing water did not constitute any kind of action (it is deemed a non-issue). No other issues were noted, and no maintenance or repairs were required. No photographs were taken during this rain event.

A scheduled semiannual inspection was performed on June 23, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. Five signs had faded text, and plants were growing on the cover. The signs were replaced on August 12, 2016, and herbicide was applied to the cover on October 4, 2016. All maintenance and restoration actions were made in accordance with the permit.

The final scheduled inspection for this reporting period was performed on December 8, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. No problems were observed, and no maintenance or repairs were required. All maintenance and restoration actions were made in accordance with the permit.

1.4 CAU 110, Area 3 WMD U-3ax/bl Crater

1.4.1 Post-Closure Requirements

Semiannual inspections are required to evaluate the condition of the cover. Photographs are taken, and the results of the inspections are documented on a checklist. The conditions of the fence, use restriction (UR) warning signs, entrance gate, and lock are documented. 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 Inspections, Repairs, and Maintenance

Due to the lengthened reporting period for this document (i.e., Oct 2015 to Dec 2016), three scheduled inspections were conducted. A scheduled inspection was performed on December 1, 2015. The site was visually inspected, and findings were recorded via checklists and photographs. There was visual evidence of minor erosion on the south side of the cover, an area of subsidence in the southeast corner of the cover, and an area of subsidence along the east side of the cover. The area of erosion does not require repair at this time; however, the areas of subsidence do require repair. All signs and fencing are in good condition; no other problems were observed. The two areas of subsidence were repaired on January 20, 2016. All maintenance and restoration actions were made in accordance with the permit.

A scheduled inspection was performed on June 22, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. One sign, located on the south side, has legible but faded text; the sign will not need to be replaced at this time. All of the fencing is in good condition. No other problems were observed.

A scheduled inspection was performed on December 6, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. The lettering of three UR signs has faded, and the three signs will need to be restored or replaced. There were signs of small burrowing animals; however, impacts of the burrowing are negligible. No repairs of the burrows will be needed. All of the fencing is in good condition. No other problems were observed. Repairs to the signs will be performed in 2017.

1.5 CAU 111, Area 5 WMD Retired Mixed Waste Pits

1.5.1 Post-Closure Requirements

Quarterly inspections are required to verify that the UR warning signs are in place and readable, and that the UR has been maintained. Photographs are taken, and the results of the inspections are documented on a checklist. The covers are inspected for cracks, animal burrows, or other evidence of subsidence or erosion. In addition, non-scheduled inspections are conducted if precipitation occurs in excess of 1.0 in. in a 24-hour period to verify the continued integrity of the covers and document any ponding or erosion. Maintenance or repair requirements are reported to NDEP and completed within 60 days of discovery.

1.5.2 Inspections, Repairs, and Maintenance

Due to the lengthened reporting period for this document (i.e., Oct 2015 to Dec 2016), five quarterly inspections, and one precipitation inspection were conducted. A 1.22-in. rain event was recorded over the weekend of October 17 and 18, 2015. On Monday, October 19, 2015, a rain event inspection was conducted. Erosion runnels were observed on all slopes of each cover. No other issues were noted. [Figure 1-1](#) shows an example of an erosion runnel at a cover. The impacted areas were repaired on November 4, 2015. All maintenance and restoration actions were made in accordance with the permit.

A quarterly inspection was performed on December 1, 2015. The site was visually inspected, and findings were recorded via checklists and photographs. Vegetation eradication, along the north cover, by herbicide was successful. There was visual evidence of subsidence and cracking on the far north cover, the west cover, and the south cover. Specifically, the following evidence was noted:

- A subsidence hole along the east central east edge of the far north cover
- A crack near the east central portion of the south cover
- Two subsidence depressions near the south central edge of the south cover
- Two areas of erosion in the southwest portion of the south cover
- Many cracks and holes along and to the east of the north–south center line of the west cover
- A crack near the east central portion of the west cover

All signs and monuments were in good condition. No other problems were observed. The subsidence and cracking were repaired on January 13, 2016. All maintenance and restoration actions were made in accordance with the permit.



Figure 1-1
Example of Runnels on Slope of South Landfill Cover, Looking East (10/19/2015)

A quarterly inspection was performed on March 2, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. There was visual evidence of subsidence and cracking on the far north cover, the west cover, and the south cover. Specifically, the following evidence was noted:

- A long crack along the eastern edge of the far north cover
- A crack near the north central edge of the south cover
- A subsidence depression in the southwest area of the south cover
- Many cracks along and to the west of the north-south center line of the west cover
- A deep, small-diameter hole near the center east edge of the west cover

The number of small animal burrows has increased on the far north, south, and west landfill covers, but these do not require repair at this time. No other problems were observed. The impacted areas were repaired on April 20, 2016. All maintenance and restoration actions were made in accordance with the permit.

A quarterly inspection was performed on June 22, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. There was visual evidence of cracking on the west and south covers. Specifically, the following evidence was noted:

- An area of three large cracks in the north central portion of the south cover
- A large crack near the north central portion of the west cover
- Two cracks near the south central portion of the west cover
- A crack southeast corner of the west cover

In addition, there was visual evidence of some minor cracking and erosion runnels. In these cases, no repairs are needed, but they should continue to be monitored. Specifically, the following evidence was noted:

- Small cracks near the southeast edge of the south cover
- Erosion runnels on a slope and near the southwest portion of the south cover
- Small cracks near the west central portion of the west cover

The impacted areas were repaired on August 4, 2016. All maintenance and restoration actions were made in accordance with the permit.

A quarterly inspection was performed on September 19, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. There was visual evidence of cracking on the west cover. Specifically, the following evidence was noted:

- Cracks in the northwest portion of the west cover
- Cracks in the east central portion of the west cover
- Cracks in west central portion of the west landfill

No other problems were observed. The impacted areas were repaired on October 26, 2016. All maintenance and restoration actions were made in accordance with the permit.

A quarterly inspection was performed on December 6, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. There was visual evidence of cracking on the west cover and the north–north cover. Specifically, the following evidence was noted:

- Cracks in the north portion of the west cover
- Cracks in west–central portion of the west landfill
- A crack in the east portion of the north–north cover

No other problems were observed. Repairs will be completed in 2017.

1.6 CAU 112, Area 23 Hazardous Waste Trenches

1.6.1 Post-Closure Requirements

Annual inspection is required to evaluate the condition of the unit. The results of the inspection are documented on a checklist. The permit does not specify a time limit for repairs at CAU 112.

1.6.2 Inspections, Repairs, and Maintenance

Due to the lengthened reporting period for this document (i.e., Oct 2015 to Dec 2016), two scheduled inspections were conducted. An annual inspection was performed on December 1, 2015. The site was visually inspected, and findings were recorded via checklists and photographs. No problems were observed, and no maintenance or repairs were required.

An annual inspection was performed on December 8, 2016. The site was visually inspected, and findings were recorded via checklists and photographs. No problems were observed, and no maintenance or repairs were required.

2.0 Subsidence Surveys and Vegetation Surveys

2.1 CAU 110, Area 3 WMD U-3ax/bl Crater

2.1.1 Subsidence Survey

Seven SMs are installed on the cover of CAU 110. The baseline survey was conducted on December 14, 2000. Subsidence surveys are performed once every other year (biennially). The most recent subsidence survey was completed on June 27, 2016. The results are tabulated in [Table 2-1](#). No significant subsidence has been observed. The next survey will be conducted in approximately June 2018.

Table 2-1
CAU 110 Subsidence Survey Results

| SM | Elevation at Top of SM ^a | | Subsidence Since December 2000 Baseline Survey |
|-------|--|---------------|--|
| | Baseline Survey – December 14, 2000 | June 27, 2016 | |
| SM #1 | 4,021.84 | 4,021.79 | -0.05 |
| SM #2 | 4,021.28 | 4,021.23 | -0.05 |
| SM #3 | 4,019.83 | 4,019.80 | -0.03 |
| SM #4 | 4,020.99 | 4,020.92 | -0.07 |
| SM #5 | 4,021.87 | 4,021.74 | -0.13 |
| SM #6 | 4,019.25 | 4,019.20 | -0.05 |
| SM #7 | 4,020.52 | 4,020.46 | -0.06 |

^a Elevations based on National Geodetic Vertical Datum of 1929 in ft.

2.1.2 Vegetation Survey

Revegetation of the CAU 110 cover was completed in December 2000. Quantitative vegetation monitoring was conducted annually from 2001 through 2013 to document the condition of the plant community and identify remedial actions that may be necessary. The vegetation on the CAU 110 cover is well established, and there are no concerns. In correspondence dated January 28, 2014, NDEP approved the recommendation to perform subjective evaluations annually and to perform detailed quantitative vegetation monitoring every five years. The annual subjective evaluations will

include site visits to observe the overall status of the plant community and identify concerns, and the detailed vegetation monitoring will include quantitative determination of plant cover and density. If concerns are noted during the annual subjective evaluations, a more detailed evaluation will be conducted and corrective measures taken as necessary.

Precipitation for FY 2016 in the vicinity of CAU 110 was still below normal, which has been the pattern for the last five years. There was fairly good precipitation from some fall storms and a few early winter storms. Precipitation from January to May 2016 was 1.72 in., which is 65 percent of the 54-year average for this same time period. Precipitation for the growing season, October 2015 to April 2016, is 2.7 in., or about 66 percent of the 54-year growing season average.

A subjective evaluation assessment of the vegetation on the CAU 110 closure cover was made on July 14, 2016. Four equally spaced passes of the closure cover were made. The vigor of perennial plant species was assessed based on current year's growth, whether plants were flowering, and whether any showed signs of stress (i.e., dead stems or leaves).

Shadscale (*Atriplex confertifolia*) continues to be the most abundant shrub species on the closure cover (Figure 2-1). None of the plants observed showed signs of stress. Flowering plants were uncommon because of the time of sampling. Current annual growth, evidenced by new leaves and stems, was good. Nevada jointfir (*Ephedra nevadensis*), the second most common perennial species, was also not in flower but showed good growth. The other shrubs occasionally encountered on the closure cover were winterfat (*Krascheninnikovia lanata*) and fourwing saltbush (*Atriplex canescens*), which like the other two shrubs did show signs of significant annual growth, but were not flowering.

No perennial grasses have been found on the closure cover for several years. As is common in a year with near normal precipitation, especially with good precipitation during the spring months, many annual plants were encountered on the closure cover in FY 2016, but they had all dried out because the sampling was in the middle of the summer.

During the vegetation surveys, small mammal activity on the CAU 110 closure cover was evaluated. During each of the four passes a number of multiple burrow complexes were noted but not counted. There was activity around the burrow entrances. The number of burrows on the cover cap is far less



Figure 2-1

Overview of Plant Community Established on the CAU 110 over the Last 16 Years

Note: Nevada jointfir and shadscale saltbush are the two most dominant plants found on the closure cover.

than in the native undisturbed areas in Yucca Flat. The area bordering the closure cover was not surveyed, but it was full of weedy annuals and no native species.

The small mammal activity on the closure cover appeared to be less than in FY 2015. Plant growth and seed production—not only on the closure cover but also in the surrounding plant communities—was much greater than it was in FY 2015 and, as a result, small mammal populations should have increased. Trapping of small mammals is not recommended at this time.

The vegetative cover on the CAU 110 cover cap appears to be stable and in excellent condition. The plants on the cap showed good growth in FY 2016 because of the increase in precipitation. There were signs of flowering and setting of seed in FY 2016 by all species, and the majority of the plants appeared healthy. The annual forb component of the plant community reappeared in FY 2016 because of the increase in precipitation. This component of the plant community fluctuates with the amount and timing of precipitation. The area surrounding the cover that was not seeded continues to be covered with noxious weeds ([Figure 2-2](#)).



Figure 2-2
Unseeded Area Occupied by Noxious Weeds
Note: Cover cap is in the upper right of photo.

An annual subjective evaluation of the plant community will continue, and the next detailed quantitative vegetation survey will be conducted in the spring of 2018.

2.2 CAU 111, Area 5 WMD Retired Mixed Waste Pits

2.2.1 Subsidence Survey

There are 52 SMs at CAU 111. The baseline survey was conducted on January 19, 2012. Subsidence surveys are required annually. A subsidence survey was completed on May 16, 2016. The results are tabulated in [Table 2-2](#). No significant subsidence has been observed.

2.2.2 Vegetation Survey

Revegetation of the CAU 111 cover was completed in December 2011. Surveys to assess the success of the revegetation effort are required annually. The objective of vegetation monitoring during the first few years is to determine whether seeds have germinated and seedlings are becoming established

Table 2-2
CAU 111 Subsidence Survey Results
(Page 1 of 2)

| SM | Elevation at Top of SM ^a | | Subsidence Since January 2012 Baseline Survey |
|-------|---------------------------------------|--------------|---|
| | Baseline Survey – January 19, 2012 | May 16, 2016 | |
| CW1-1 | 3,197.01 | 3,196.99 | -0.02 |
| CW1-2 | 3,197.17 | 3,197.17 | 0.00 |
| P01-1 | 3,191.52 | 3,191.46 | -0.06 |
| P01-2 | 3,187.86 | 3,187.75 | -0.11 |
| P02-1 | 3,194.13 | 3,193.89 | -0.24 |
| P02-2 | 3,191.11 | 3,190.93 | -0.18 |
| P03-1 | 3,206.56 | 3,206.48 | -0.08 |
| P03-2 | 3,205.82 | 3,205.75 | -0.07 |
| P04-2 | 3,194.30 | 3,194.27 | -0.03 |
| P04-3 | 3,190.20 | 3,190.13 | -0.07 |
| P04-4 | 3,185.91 | 3,185.64 | -0.27 |
| P05-2 | 3,191.58 | 3,191.50 | -0.08 |
| P05-3 | 3,187.91 | 3,187.88 | -0.03 |
| P05-4 | 3,182.92 | 3,182.89 | -0.03 |
| P06-1 | 3,195.06 | 3,195.01 | -0.05 |
| P06-2 | 3,192.78 | 3,192.74 | -0.04 |
| P07-1 | 3,192.37 | 3,192.23 | -0.14 |
| P07-2 | 3,190.26 | 3,190.21 | -0.05 |
| P09-2 | 3,194.60 | 3,194.57 | -0.03 |
| P09-3 | 3,194.49 | 3,194.47 | -0.02 |
| P11-2 | 3,189.20 | 3,189.16 | -0.04 |
| P11-3 | 3,186.61 | 3,186.57 | -0.04 |
| P11-4 | 3,182.18 | 3,182.16 | -0.02 |
| T01-1 | 3,201.63 | 3,201.58 | -0.05 |
| T01-2 | 3,201.51 | 3,201.49 | -0.02 |
| T01-3 | 3,185.80 | 3,185.74 | -0.06 |
| T01-4 | 3,185.75 | 3,185.70 | -0.05 |

Table 2-2
CAU 111 Subsidence Survey Results
(Page 2 of 2)

| SM | Elevation at Top of SM ^a | | Subsidence Since January 2012 Baseline Survey |
|-------|---------------------------------------|--------------|---|
| | Baseline Survey – January 19, 2012 | May 16, 2016 | |
| T02-1 | 3,201.61 | 3,201.62 | 0.01 |
| T02-2 | 3,201.54 | 3,201.57 | 0.03 |
| T02-4 | 3,191.59 | 3,191.55 | -0.04 |
| T02-5 | 3,188.02 | 3,188.03 | 0.01 |
| T03-1 | 3,200.69 | 3,200.64 | -0.05 |
| T03-2 | 3,200.64 | 3,200.60 | -0.04 |
| T03-3 | 3,192.59 | 3,192.57 | -0.02 |
| T04-2 | 3,202.74 | 3,202.70 | -0.04 |
| T04-4 | 3,202.71 | 3,202.69 | -0.02 |
| T04-5 | 3,202.75 | 3,202.76 | 0.01 |
| T04-6 | 3,191.69 | 3,191.68 | -0.01 |
| T04-7 | 3,188.07 | 3,188.06 | -0.01 |
| T05-1 | 3,200.57 | 3,200.59 | 0.02 |
| T05-2 | 3,200.65 | 3,200.71 | 0.06 |
| T06-1 | 3,199.49 | 3,199.51 | 0.02 |
| T06-2 | 3,199.55 | 3,199.58 | 0.03 |
| T06-3 | 3,191.70 | 3,191.69 | -0.01 |
| T06-4 | 3,188.24 | 3,188.26 | 0.02 |
| T07-2 | 3,199.40 | 3,199.38 | -0.02 |
| T07-3 | 3,199.31 | 3,199.28 | -0.03 |
| T07-5 | 3,191.65 | 3,191.59 | -0.06 |
| T07-6 | 3,187.82 | 3,187.82 | 0.00 |
| T08-1 | 3,198.06 | 3,198.03 | -0.03 |
| T08-2 | 3,196.71 | 3,196.73 | 0.02 |
| T09-1 | 3,201.08 | 3,201.08 | 0.00 |

^a Elevations based on National Geodetic Vertical Datum of 1929 in ft.

on the site. The first vegetation survey was completed in May 2013. Due to low germination success and high rates of plant mortality, it was concluded that the covers required remedial revegetation.

Various revegetation attempts have been performed since October 2013, with poor results. In 2015, an additional evaluation of the site was performed. Results of the evaluation concluded that undesirable plants species flourished while desirable plant species did not. Additionally, small mammal populations added to the detriment of the desirable plant species due to consumption.

A meeting with NDEP was held on October 21, 2015, to discuss options. It was agreed that the U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office (NNSA/NFO) will research other approaches, including subcontracting the effort to a professional reclamation firm.

During 2016, the Tribal Revegetation Committee (TRC) was formed and tasked with developing guidance from a unique tribal perspective. The TRC made a site visit to the 92-acre area on June 13, 2016. After visiting the 92-acre area and receiving background information, the TRC held several meetings and deliberated on how to best address the revegetation challenges. The TRC, in collaboration with a Portland State University ethnoecologist under contract to Desert Research Institute, submitted a recommendations report to NNSA/NFO on July 29, 2016. The recommendations were presented in the “Phase 1 Recommendations, Tribal Revegetation Project, Nevada National Security Site.” The report identified approaches that incorporate tribal perspectives in revegetating the site. The report included tribal perspectives on the Nevada National Security Site (NNSS) and the basis for those perspectives; recommendations for future test plots on the 92-acre area; and a request that NNSA/NFO include the Consolidated Group of Tribes and Organizations and the TRC in ongoing and future planning and co-management activities that integrate tribal ecological knowledge to restore balance to other areas on the NNSS.

On June 29, 2016, a subjective plant evaluation on the north–south cover was performed. No “new” fourwing saltbush plants were observed. All of the plants were at least two years old. Some plants were small but have regrown due to the amount of precipitation. Comparatively, the plant growth was more in FY 2016 and was more visible than in FY 2015. During the evaluation, two rabbits were observed within the enclosure. The rabbits have been consuming the fourwing saltbushes. It is most probable if there were “new” plant seedlings in FY 2016, the rabbits would have consumed them.

3.0 CAU 110 Soil Moisture Monitoring

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 3-1](#) illustrates the locations of TDR probes on the cover. Moisture content data from the TDR probes are downloaded daily using a radio-to-intranet connection.

Precipitation data were collected from the Area 3 Meteorological Station, located approximately 100 ft northwest of CAU 110. The precipitation data are presented in [Figure 3-2](#). Graphs of the TDR-derived soil moisture content profiles, combined with the daily precipitation values, are presented in [Figures 3-3 through 3-6](#). The time span illustrated in [Figures 3-3 through 3-6](#) has been changed from previous years' reports to provide a better visual presentation of the data. The data presented in this report span from January 2012 to December 2016.

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 of these systems to remove moisture can be locally inhibited if animal burrowing and grazing on plants affects the root systems; therefore, animal burrows are routinely backfilled, and small mammals are occasionally 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.

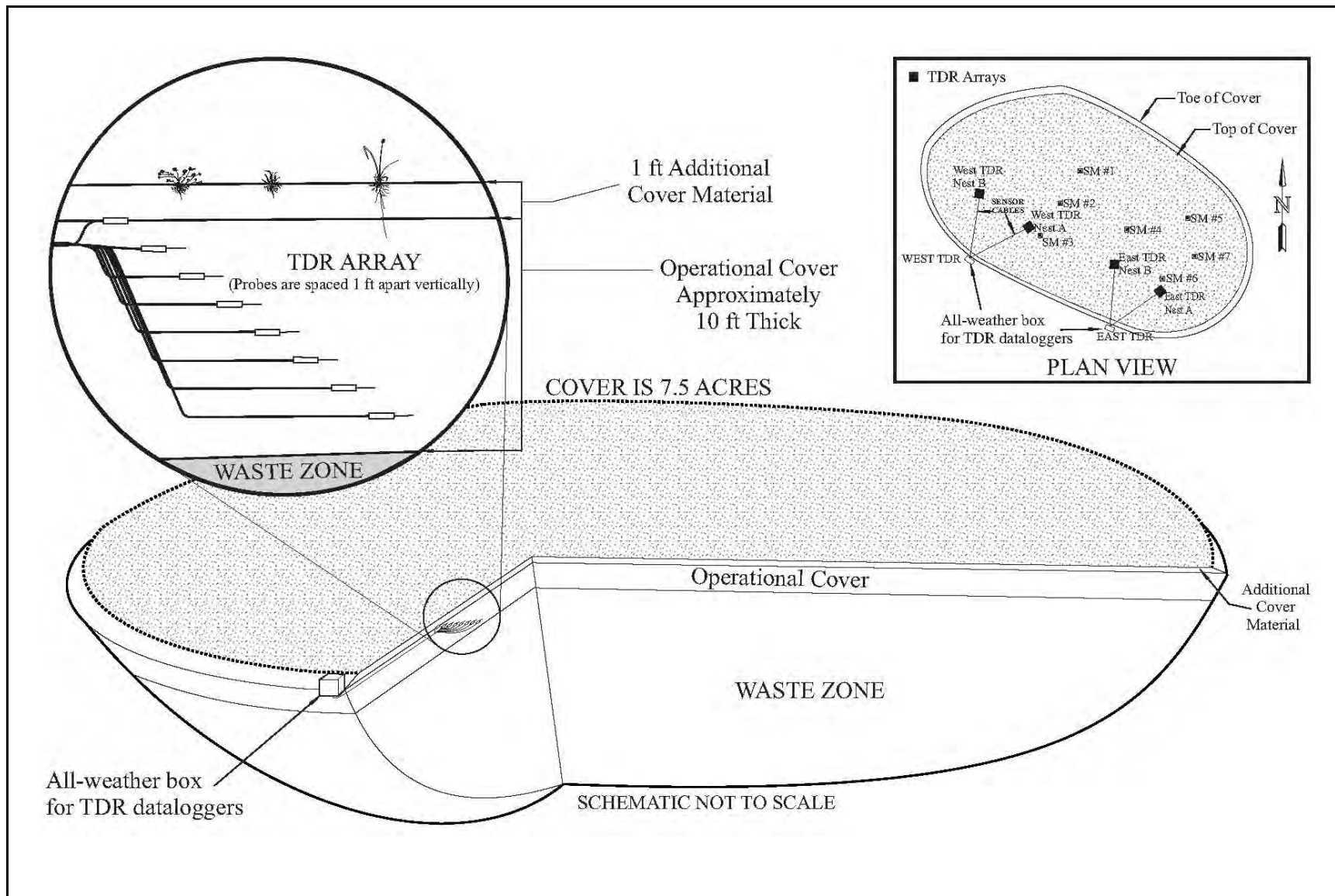


Figure 3-1
CAU 110 Time Domain Reflectometry Locations

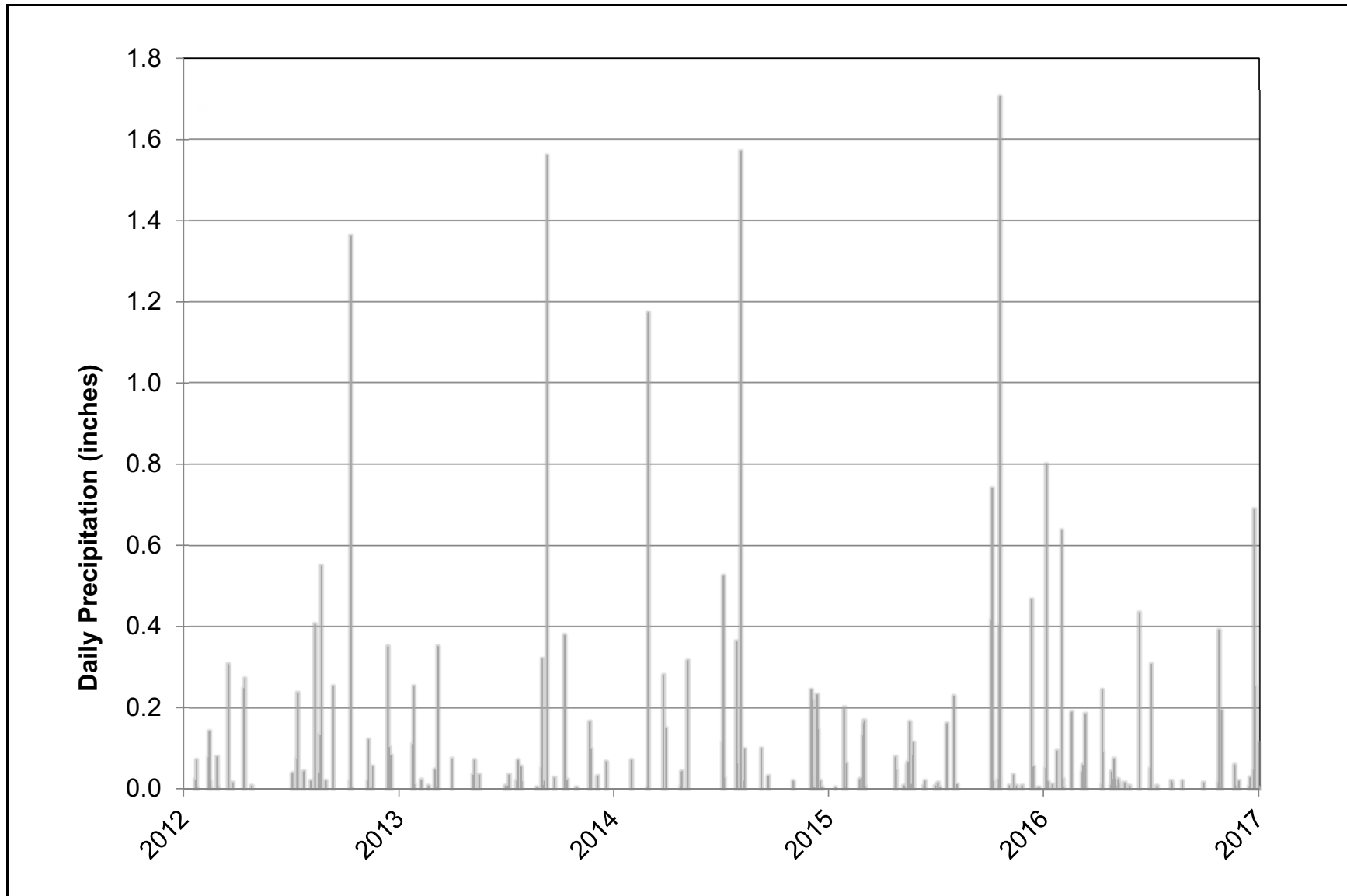


Figure 3-2
Precipitation Data for the Area 3 Meteorological Station

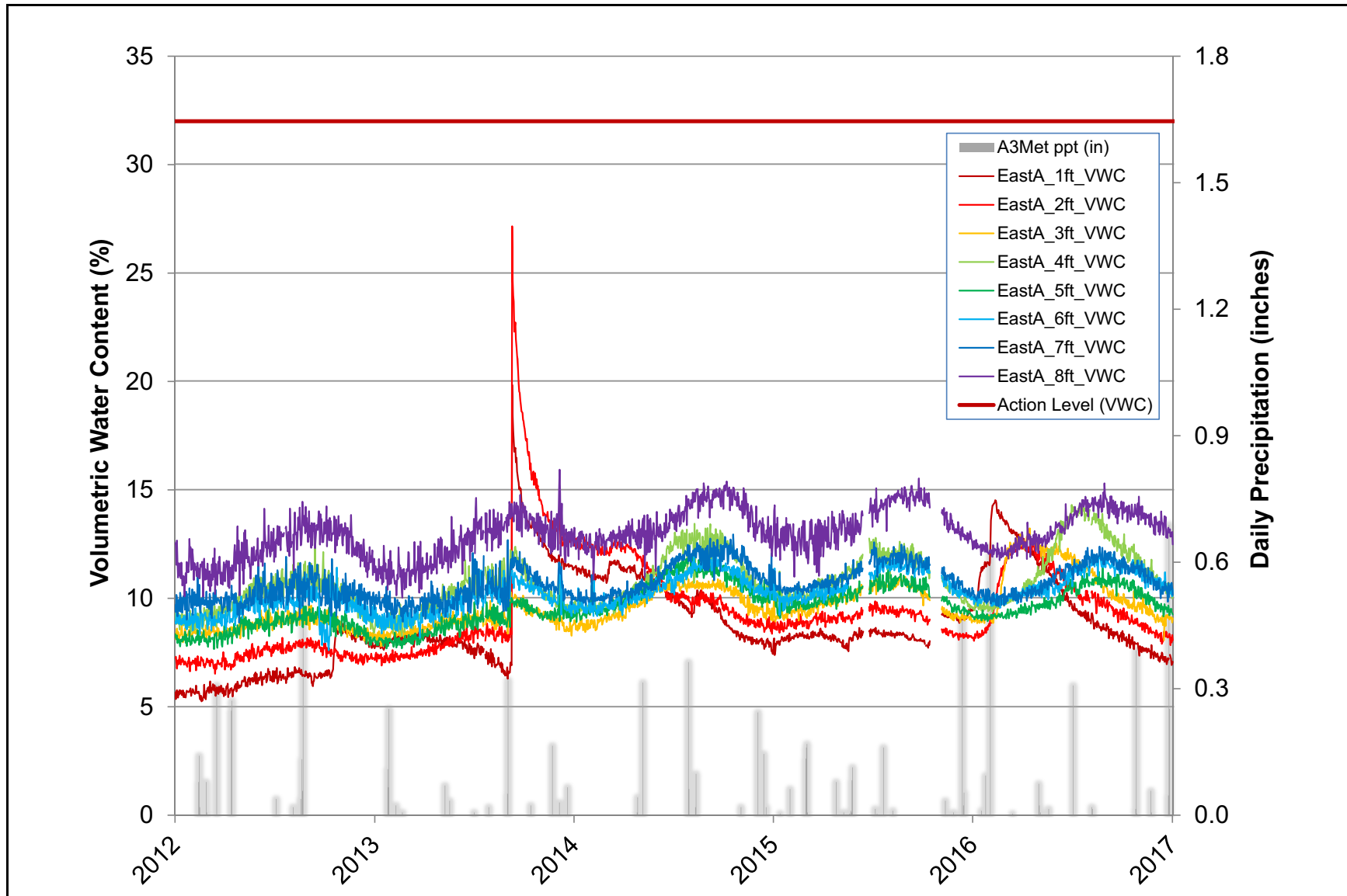


Figure 3-3
East TDR Nest A Soil Moisture Content Profile

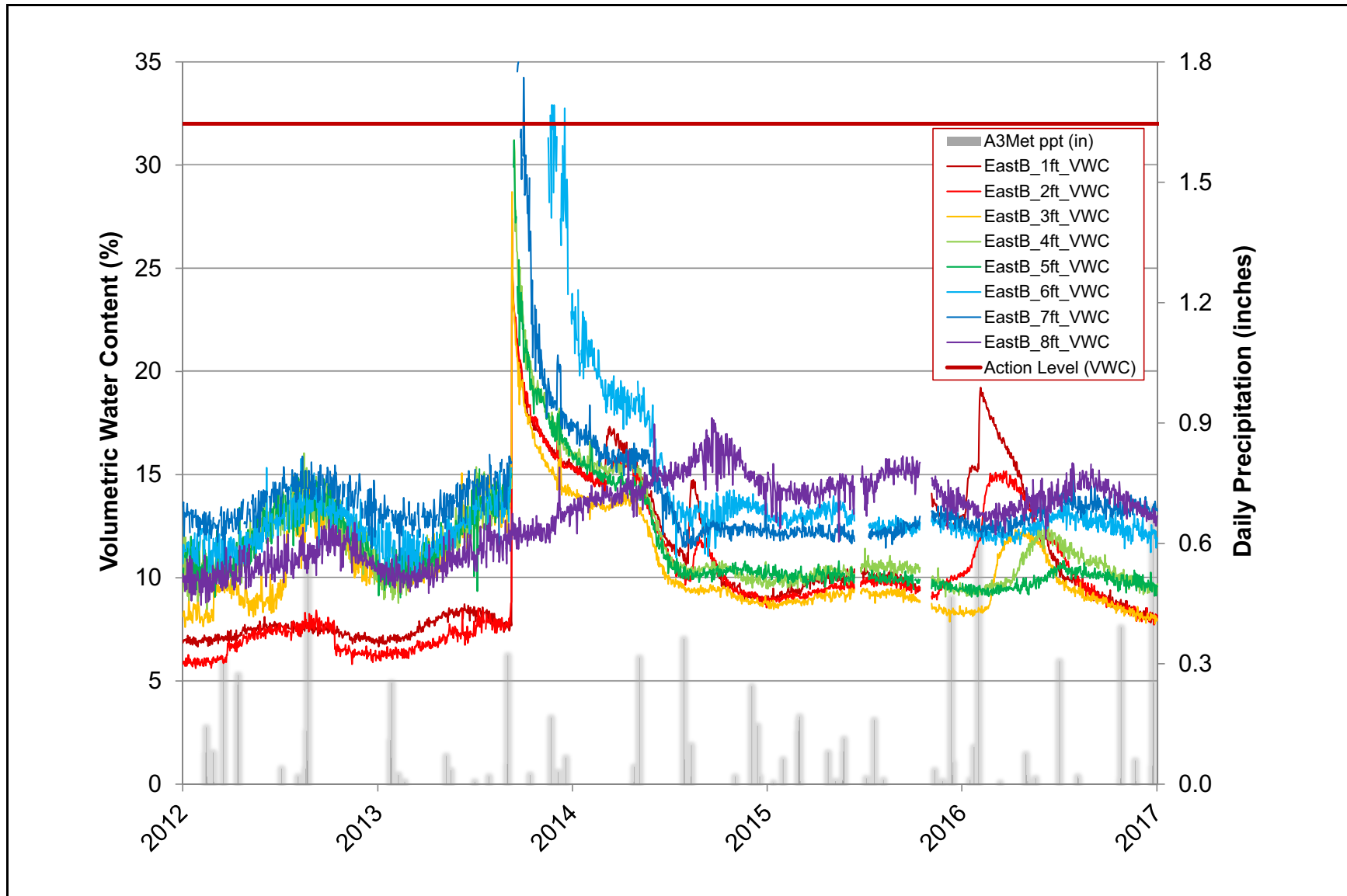


Figure 3-4
East TDR Nest B Soil Moisture Content Profile

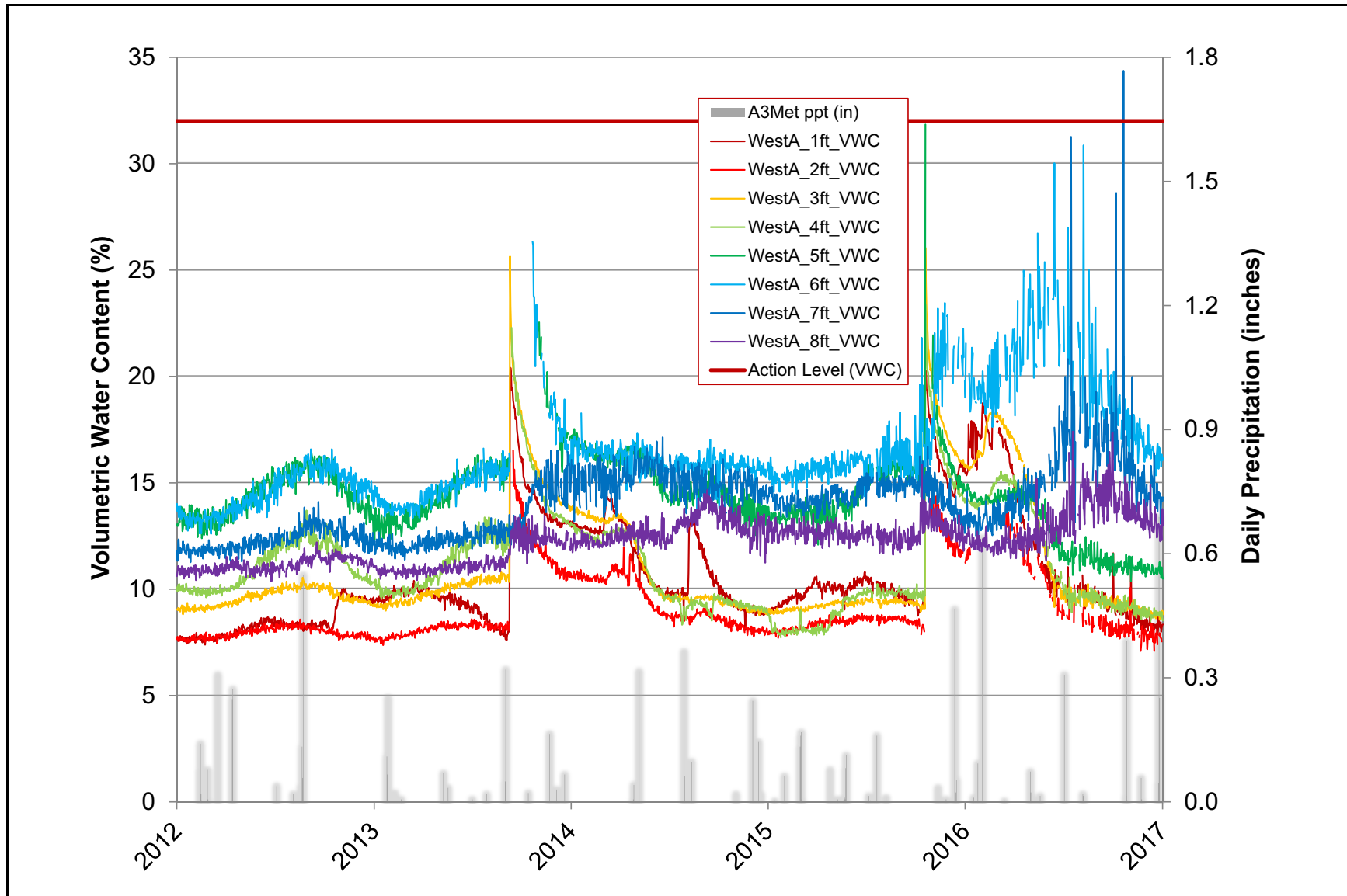


Figure 3-5
West TDR Nest A Soil Moisture Content Profile

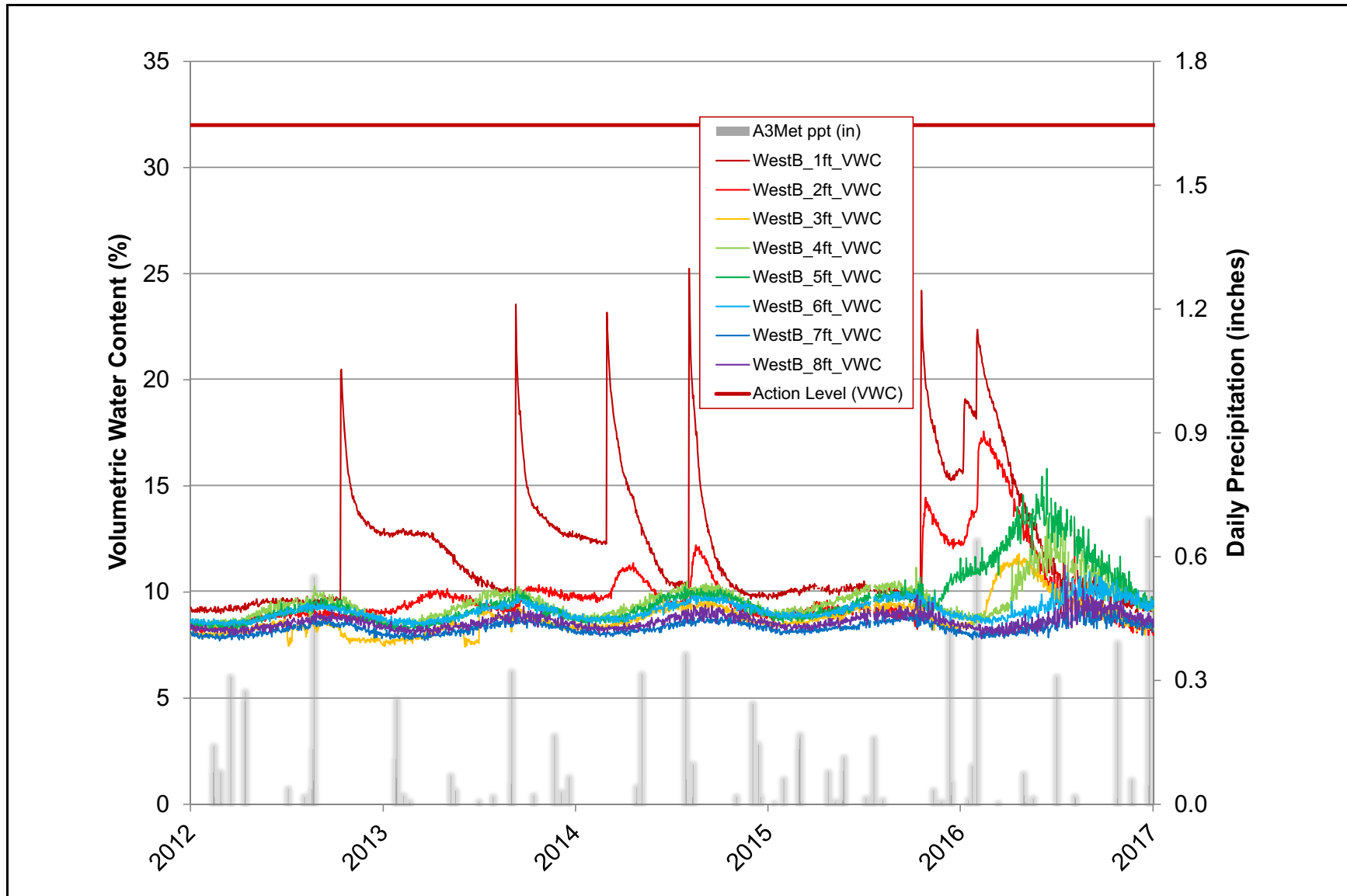


Figure 3-6
West TDR Nest B Soil Moisture Content Profile

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

- The averaged water content of the three deepest TDR probes (6, 7, and 8 ft) is greater than 32 percent volumetric moisture content for a continuous six-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, 7, 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 (32 percent) is illustrated in [Figures 3-3](#) through [3-6](#). The action level was not exceeded over any six-month period.

4.0 Conclusions and Recommendations

4.1 CAU 90, Area 2 Bitcutter Containment

Annual inspection was performed as required. Future inspections will be conducted annually.

4.2 CAU 91, Area 3 U-3fi Injection Well

Annual inspection was performed as required. Future inspections will be conducted annually.

4.3 CAU 92, Area 6 Decon Pond Facility

Semiannual inspections were performed as required. Future inspections will be conducted semiannually and after precipitation in excess of 1.0 in. within a 24-hour period.

4.4 CAU 110, Area 3 WMD U-3ax/bl Crater

Semiannual inspections were performed as required. Soil moisture results indicate that the cover is functioning as designed, and the action level was not exceeded. It is recommended to continue soil moisture monitoring, biennial subsidence surveys, annual subjective vegetation evaluations, and detailed quantitative vegetation monitoring every five years. Future inspections will be conducted semiannually.

4.5 CAU 111, Area 5 WMD Retired Mixed Waste Pits

Quarterly inspections were performed as required. There were no precipitation events in excess of 1.0 in. from October 2015 through the end of 2016. Therefore, no precipitation inspections were conducted at CAU 111. Because of the frequent subsidence at this CAU, it is recommended to continue inspections quarterly and after precipitation events in excess of 1.0 in. within a 24-hour period.

Results of additional monitoring at CAU 111 are documented annually in the *Nevada National Security Site Waste Management Monitoring Report Area 3 and Area 5 Radioactive Waste Management Sites*, and in the *Nevada National Security Site Data Report: Groundwater Monitoring*

Program Area 5 Radioactive Waste Management Site. These monitoring activities will continue as scheduled.

4.6 CAU 112, Area 23 Hazardous Waste Trenches

Annual inspection was performed as scheduled. Future inspections will be conducted annually.

Appendix A
Inspection Checklists
(49 Pages)

CAU 90 Inspection Checklist

Note: The enclosed Post-Closure Inspection Checklist was completed as a semiannual inspection; however, on December 10, 2015, the inspection frequency was changed to annual.

POST-CLOSURE INSPECTION CHECKLIST

CAU 90, AREA 2 BITCUTTER CONTAINMENT –
CAS 02-20-01, BITCUTTER/PS INJ. WELLS (3) (RCRA), AND CAS 02-20-03, WASTEWATER PIT

| | |
|---|--|
| Inspection Date: 12/3/15 | Reason for Inspection: semi-annual |
| Date of Last Post-Closure Inspection: 6/25/15 | Reason for Last Post-Closure Inspection: semi-annual |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J Petrello | Title: TaskLead |
| Assistant Inspector: M Loeschner | Title: Environmental Scientist |

A. GENERAL INSTRUCTIONS

- 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.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|----|---|
| 1. Were anomalies or trends detected on previous inspections? | | X | |
| 2. Were maintenance or repair activities performed since the last inspection? | | X | |
| a. If yes, has repair resulted in a change from as-built conditions? | | NA | X |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | NA | X |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | | X | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there damage to the gate or gate lock? | | X | |
| b. Is there damage to or a break in the fence? | | X | |
| c. Have any fenceposts been damaged or their anchoring weakened? | | X | |
| d. Are all use restriction signs legible? | X | | |
| e. How many damaged or missing use restriction signs need to be replaced? | | 0 | |
| f. How many use restriction signs are down or loose and need to be re-hung? | | 0 | |
| g. Is there damage to any of the monuments? | | X | |
| 3. Waste Unit Covers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | | X | |
| b. Is there evidence of erosion (wind or water)? | | X | |
| c. Is there evidence of human intrusion onto the site? | | X | |
| d. Is there evidence of large animal intrusion onto the site? | | X | |

| POST-CLOSURE INSPECTION CHECKLIST | | | |
|--|-------------------------------------|-------------------------------------|---|
| CAU 90, AREA 2 BITCUTTER CONTAINMENT – CAS 02-20-01, BITCUTTER/PS INJ. WELLS (3) (RCRA), AND CAS 02-20-03, WASTEWATER PIT | | | |
| e. Is there evidence of animal burrowing? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| f. Is there vegetation growing on the cover? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | CAS 02-20-01 needs veg. removal |
| g. Is there trash or debris within the fenced area? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| h. Are there any other issues not specifically described in this checklist? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Photograph Instructions: <ul style="list-style-type: none"> The following photographs must be taken during each inspection: <ul style="list-style-type: none"> - Three of the west unit from outside the fence, one in each compass direction (i.e., N, S, E) - Three of the east unit from outside the fence, one in each compass direction (i.e., N, S, W) Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report. Photographs will be filed electronically. | | | |
| 4. Photograph Documentation: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Have the required photographs of the site been taken? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| D. FIELD CONCLUSIONS | YES | NO | EXPLANATION (required if shaded box is checked) |
| 1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 15 centimeters deep that extend less than 1 meter on the cover) required? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 15 centimeters deep and 1 meter long on the cover?) Deficiencies requiring a remedy other than general housekeeping issues shall be remedied within 60 days of discovery. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Is there an imminent hazard to the integrity of the landfill cover? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 4. Field Conclusions/Recommendations: All signs and fencing in good condition. Vegetation within the fenced enclosure of CAS 02-20-01 should be removed. | | | |
| E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments. | | | |
| Chief Inspector's Signature: /s/ Jackie Petrello | | Date: 12/3/15 | |
| F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete. | | | |
| Signature: /s/ Matt Loeschner | | Date: 12/3/15 | |
| Printed Name: MAT LOESCHNER | | | |

POST-CLOSURE INSPECTION CHECKLIST**CAU 90, AREA 2 BITCUTTER CONTAINMENT –
CAS 02-20-01, BITCUTTER/PS INJ. WELLS (3) (RCRA), AND CAS 02-20-03, WASTEWATER PIT**

| | |
|---|--|
| Inspection Date: 12/8/2016 | Reason for Inspection: Annual |
| Date of Last Post-Closure Inspection: 12/3/2015 | Reason for Last Post-Closure Inspection: Annual |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: Juan Alvarez | Title: Environmental Scientist II |
| Assistant Inspector: Steve Felton | Title: Environmental Scientist II |

A. GENERAL INSTRUCTIONS

- 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.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

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

| | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-------------------------------------|-------------------------------------|---|
| 1. Were anomalies or trends detected on previous inspections? | <input checked="" type="checkbox"/> | | vegetation need to be removed |
| 2. Were maintenance or repair activities performed since the last inspection? | <input checked="" type="checkbox"/> | | completed vego removal 12/3/16 |
| a. If yes, has repair resulted in a change from as-built conditions? | | <input checked="" type="checkbox"/> | NA |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | <input checked="" type="checkbox"/> | NA |

C. SITE INSPECTION (To be completed during the site visit)

| | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-------------------------------------|-------------------------------------|---|
| 1. Adjacent Offsite Features: | | | |
| a. Are there any new activities or offsite features that could potentially affect the site? | | <input checked="" type="checkbox"/> | |
| 2. Site Markers: | | | |
| a. Is there damage to the gate or gate lock? | | <input checked="" type="checkbox"/> | |
| b. Is there damage to or a break in the fence? | | <input checked="" type="checkbox"/> | |
| c. Have any fenceposts been damaged or their anchoring weakened? | | <input checked="" type="checkbox"/> | |
| d. Are all use restriction signs legible? | <input checked="" type="checkbox"/> | | |
| e. How many damaged or missing use restriction signs need to be replaced? | | <input checked="" type="checkbox"/> | 0 |
| f. How many use restriction signs are down or loose and need to be re-hung? | | <input checked="" type="checkbox"/> | 0 |
| g. Is there damage to any of the monuments? | | <input checked="" type="checkbox"/> | |
| 3. Waste Unit Covers: | | | |
| a. Is there evidence of settling or cracking? | | <input checked="" type="checkbox"/> | |
| b. Is there evidence of erosion (wind or water)? | | <input checked="" type="checkbox"/> | |
| c. Is there evidence of human intrusion onto the site? | | <input checked="" type="checkbox"/> | |
| d. Is there evidence of large animal intrusion onto the site? | | <input checked="" type="checkbox"/> | |

2-2-17
RHH

POST-CLOSURE INSPECTION CHECKLIST**CAU 90, AREA 2 BITCUTTER CONTAINMENT –
CAS 02-20-01, BITCUTTER/PS INJ. WELLS (3) (RCRA), AND CAS 02-20-03, WASTEWATER PIT**

e. Is there evidence of animal burrowing?

✕

f. Is there vegetation growing on the cover?

✕

g. Is there trash or debris within the fenced area?

✕

h. Are there any other issues not specifically described in this checklist?

✕

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Three of the west unit from outside the fence, one in each compass direction (i.e., N, S, E)
 - Three of the east unit from outside the fence, one in each compass direction (i.e., N, S, W)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have the required photographs of the site been taken?

✕

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 15 centimeters deep that extend less than 1 meter on the cover) required?

✕

2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 15 centimeters deep and 1 meter long on the cover?) Deficiencies requiring a remedy other than general housekeeping issues shall be remedied within 60 days of discovery.

✕

3. Is there an imminent hazard to the integrity of the landfill cover?

✕

4. Field Conclusions/Recommendations: *Both areas are in good condition, no issues***E. CERTIFICATION:** I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.Chief Inspector's Signature: */s/ Juan J. Alvarado*Date: *12/8/16***F. VERIFICATION:** I have reviewed this checklist and attachments and have verified that they are complete.Signature: */s/ Dawn Siekerman*Date: *2-2-17*Printed Name: *Dawn Siekerman*

CAU 91 Inspection Checklist

POST-CLOSURE INSPECTION CHECKLIST

CAU 91, AREA 3 U-3FI INJECTION WELL – CAS 03-20-03, U-3FI WASTE DISPOSAL UNIT (RCRA)

| | |
|---|--|
| Inspection Date: 6/23/16 | Reason for Inspection: Annual |
| Date of Last Post-Closure Inspection: 9/15/15 | Reason for Last Post-Closure Inspection: Semi-annual |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J Petrellio | Title: TASK LEAD |
| Assistant Inspector: L Davis | Title: ENVIRONMENTAL SCIENTIST |

A. GENERAL INSTRUCTIONS

- 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.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-------------------------------------|-------------------------------------|---|
| 1. Were anomalies or trends detected on previous inspections? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2. Were maintenance or repair activities performed since the last inspection? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| a. If yes, has site repair resulted in a change from as-built conditions? | <input checked="" type="checkbox"/> | NA | <input checked="" type="checkbox"/> |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | <input checked="" type="checkbox"/> | NA | <input checked="" type="checkbox"/> |

| C. SITE INSPECTION (To be completed during the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-------------------------------------|-------------------------------------|---|
| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Are there any new activities or offsite features that could potentially affect the site? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there damage to the gate or gate lock? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| b. Is there damage to or a break in the fence? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| c. Have any fenceposts been damaged or their anchoring weakened? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| d. Are all use restriction signs legible? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e. How many damaged or missing use restriction signs need to be replaced? | <input checked="" type="checkbox"/> | 0 | |
| f. How many use restriction signs are down or loose and need to be re-hung? | <input checked="" type="checkbox"/> | 0 | |
| g. Is there damage to the monument or monitoring well? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Waste Unit Cover: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| b. Is there evidence of erosion (wind or water)? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| c. Is there evidence of human intrusion onto the site? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| d. Is there evidence of large animal intrusion onto the site? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |

POST-CLOSURE INSPECTION CHECKLIST

CAU 91, AREA 3 U-3FI INJECTION WELL – CAS 03-20-03, U-3FI WASTE DISPOSAL UNIT (RCRA)

e. Is there evidence of animal burrowing?

X

f. Is there vegetation growing on the cover?

X

vegetation should be removed

g. Is there trash or debris within the fenced area?

X

h. Are there any other issues not specifically described in this checklist?

X

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Four from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four of the unit from outside the fence, one in each compass direction
 - Two of the monitoring well surface (N and S)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have the required photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is there an imminent hazard to the integrity of the landfill cover?

X

2. Field Conclusions and Repair or Maintenance Recommendations:

Vegetation is present and should be removed. no other problems.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 6/27/16

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Steve Felton

Date: 6/27/14

Printed Name: STEVE FELTON

CAU 92 Inspection Checklists

Note: The enclosed Post-Closure Inspection Checklist performed December 3, 2015, was completed as a quarterly inspection; however, on December 10, 2015, the inspection frequency was changed to semiannual.

POST-CLOSURE INSPECTION CHECKLIST**CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)**

| | |
|--|---|
| Inspection Date: <u>10/19/15</u> | Reason for Inspection: <u>RAIN EVENT</u> |
| If this inspection is for a rain event, date of event: <u>10/16-10/18</u> | Quantity of Rainfall: <u>1.70</u> inches |
| Date of Last Post-Closure Inspection: <u>10/19/15</u> 09/15/15 | Reason for Last Post-Closure Inspection: <u>QUARTERLY</u> |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed, J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: <u>Jaclyn Petrello</u> | Title: <u>TASK LEAD</u> |
| Assistant Inspector: <u>JEFF HOUGHTON</u> | Title: <u>RADIATION CONTROL TECHNICIAN</u> |

A. GENERAL INSTRUCTIONS

- 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.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|---------|---|
| 1. Were anomalies or trends detected on previous inspections? | | X | |
| 2. Were maintenance or repair activities performed since the last inspection? | | X | |
| a. If yes, has repair resulted in a change from as-built conditions? | | NA X | |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | NA X | |

C. SITE INSPECTION (To be completed during the site visit)

| | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| 1. Adjacent Offsite Features: | | | |
| a. Are there any new activities or offsite features that could potentially affect the site? | | X | |
| 2. Site Markers: | | | |
| a. Is there damage to the gate or gate lock? | | X | |
| b. Is there damage to or a break in the fence? | | X | |
| c. Have any fenceposts been damaged or their anchoring weakened? | | X | |
| d. Are all use restriction signs legible? | X | | |
| e. How many damaged or missing use restriction signs need to be replaced? | | 0 | |
| f. How many use restriction signs are down or loose and need to be re-hung? | | 0 | |
| g. Do any Underground Radioactive Material Area signs need to be replaced or re-hung? | | X | |
| h. Is there damage to any of the subsidence survey markers? | | X | |
| i. Is there standing water within the fenced area? | X | | small puddles in western corner, NOT ON MOUND |
| j. Is there trash or other debris within the fenced area? | | X | |
| 3. Waste Unit Cover: | | | |
| a. Is there evidence of settling or cracking? | | X | |

POST-CLOSURE INSPECTION CHECKLIST**CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)**

| | | |
|---|-------------------------------------|--|
| b. Is there evidence of erosion (wind or water)? | <input checked="" type="checkbox"/> | |
| c. Is there evidence of human intrusion onto the site? | <input checked="" type="checkbox"/> | |
| d. Is there evidence of large animal intrusion onto the site? | <input checked="" type="checkbox"/> | |
| e. Is there evidence of animal burrowing? | <input checked="" type="checkbox"/> | |
| f. Is there vegetation growing on the cover? | <input checked="" type="checkbox"/> | |
| g. Is there standing water on the cover? | <input checked="" type="checkbox"/> | |
| h. Are there any other issues not specifically described in this checklist? | <input checked="" type="checkbox"/> | |

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Four from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

| 4. Photograph Documentation: | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|--------------------------|-------------------------------------|---|
| a. Have all required photographs of the site been taken? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | OVERVIEW & PUDDIES ONLY |

| D. FIELD CONCLUSIONS | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|--------------------------|-------------------------------------|---|
| 1. Is general housekeeping or minor repair (including cracks or settling less than 2 inches deep on the cover) required? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (i.e., are there cracks greater than 2 inches deep on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 2 inches deep on the cover shall be completed within 60 days of discovery. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Is there an imminent hazard to the integrity of the landfill cover? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

4. Field Conclusions/Recommendations: THERE ARE SMALL PUDDIES WITHIN FENCED AREA BUT OFF OF MOUNDED COVER. NO EROSION OR OTHER PROBLEMS.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 10/19/15

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Jeff Houghton

Date: 10-19-15

Printed Name: JEFF HOUGHTON

POST-CLOSURE INSPECTION CHECKLIST

CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)

| | |
|--|---|
| Inspection Date: 12/3/15 | Reason for Inspection: QUARTERLY |
| If this inspection is for a rain event, date of event: NA | Quantity of Rainfall: NA inches |
| Date of Last Post-Closure Inspection: 10/19/15 | Reason for Last Post-Closure Inspection: RAIN EVENT |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed. J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J PETRUCCIO | Title: TASK LEAD |
| Assistant Inspector: M LOESCHNER | Title: Environmental Scientist |

A. GENERAL INSTRUCTIONS

- 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.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|---------|---|
| 1. Were anomalies or trends detected on previous inspections? | | X | |
| 2. Were maintenance or repair activities performed since the last inspection? | | X | |
| a. If yes, has repair resulted in a change from as-built conditions? | | NA X | |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | NA X | |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | | X | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there damage to the gate or gate lock? | | X | |
| b. Is there damage to or a break in the fence? | | X | |
| c. Have any fenceposts been damaged or their anchoring weakened? | | X | |
| d. Are all use restriction signs legible? | X | | |
| e. How many damaged or missing use restriction signs need to be replaced? | | 0 | |
| f. How many use restriction signs are down or loose and need to be re-hung? | | 0 | |
| g. Do any Underground Radioactive Material Area signs need to be replaced or re-hung? | | X | |
| h. Is there damage to any of the subsidence survey markers? | | X | |
| i. Is there standing water within the fenced area? | | X | |
| j. Is there trash or other debris within the fenced area? | | X | |
| 3. Waste Unit Cover: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | | X | |

POST-CLOSURE INSPECTION CHECKLIST**CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)**

- b. Is there evidence of erosion (wind or water)?
- c. Is there evidence of human intrusion onto the site?
- d. Is there evidence of large animal intrusion onto the site?
- e. Is there evidence of animal burrowing?
- f. Is there vegetation growing on the cover?
- g. Is there standing water on the cover?
- h. Are there any other issues not specifically described in this checklist?

X

X

X

X

X

X

X

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Four from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

- a. Have all required photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling less than 2 inches deep on the cover) required?
2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (i.e., are there cracks greater than 2 inches deep on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 2 inches deep on the cover shall be completed within 60 days of discovery.
3. Is there an imminent hazard to the integrity of the landfill cover?

X

X

X

4. Field Conclusions/Recommendations:

All signs, fencing, and cover in good condition, no problems

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 12/3/15

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Matt Loeschner

Date: 12/3/15

Printed Name: Matt Loeschner

POST-CLOSURE INSPECTION CHECKLIST

CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)

| | |
|---|--|
| Inspection Date: 12/14/15 | Reason for Inspection: Rain event |
| If this inspection is for a rain event, date of event: 12/11/15 | Quantity of Rainfall: 0.52 inches |
| Date of Last Post-Closure Inspection: 12/3/15 | Reason for Last Post-Closure Inspection: QUARTERLY |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J PETROILLO | Title: TASK LEAD |
| Assistant Inspector: J CASTRO | Title: Radiological Control Technician |

A. GENERAL INSTRUCTIONS

- 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.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|----|---|
| 1. Were anomalies or trends detected on previous inspections? | | X | |
| 2. Were maintenance or repair activities performed since the last inspection? | | X | |
| a. If yes, has repair resulted in a change from as-built conditions? | | | NA X |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | | NA X |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | | X | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there damage to the gate or gate lock? | | X | |
| b. Is there damage to or a break in the fence? | | X | |
| c. Have any fenceposts been damaged or their anchoring weakened? | | X | |
| d. Are all use restriction signs legible? | X | | |
| e. How many damaged or missing use restriction signs need to be replaced? | | 0 | |
| f. How many use restriction signs are down or loose and need to be re-hung? | | 0 | |
| g. Do any Underground Radioactive Material Area signs need to be replaced or re-hung? | | X | |
| h. Is there damage to any of the subsidence survey markers? | | X | |
| i. Is there standing water within the fenced area? | X | | very small amount NW corner |
| j. Is there trash or other debris within the fenced area? | | X | |
| 3. Waste Unit Cover: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | | X | |

POST-CLOSURE INSPECTION CHECKLIST**CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)**

- b. Is there evidence of erosion (wind or water)?
- c. Is there evidence of human intrusion onto the site?
- d. Is there evidence of large animal intrusion onto the site?
- e. Is there evidence of animal burrowing?
- f. Is there vegetation growing on the cover?
- g. Is there standing water on the cover?
- h. Are there any other issues not specifically described in this checklist?

X

X

X

X

X

X

X

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Four from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

- a. Have all required photographs of the site been taken?

X

overview only

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling less than 2 inches deep on the cover) required?
2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (i.e., are there cracks greater than 2 inches deep on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 2 inches deep on the cover shall be completed within 60 days of discovery.
3. Is there an imminent hazard to the integrity of the landfill cover?

X

X

X

4. Field Conclusions/Recommendations:

Very small amount of standing water within fenced area, but not on cover. No problems.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 12/14/15

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Juvencio Castro

Date: 12-14-15

Printed Name: J CASTRO

POST-CLOSURE INSPECTION CHECKLIST

CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)

| | |
|--|---|
| Inspection Date: 6/23/16 | Reason for Inspection: Semi-annual |
| If this inspection is for a rain event, date of event: NA | Quantity of Rainfall: NA inches |
| Date of Last Post-Closure Inspection: 12/14/15 | Reason for Last Post-Closure Inspection: Rain event |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed. J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J Petrellio | Title: Task Lead |
| Assistant Inspector: L Davis | Title: Environmental Scientist |

A. GENERAL INSTRUCTIONS

- 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.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|---------|---|
| 1. Were anomalies or trends detected on previous inspections? | | X | |
| 2. Were maintenance or repair activities performed since the last inspection? | | X | |
| a. If yes, has repair resulted in a change from as-built conditions? | | NA X | |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | NA X | |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | | X | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there damage to the gate or gate lock? | | X | |
| b. Is there damage to or a break in the fence? | | X | |
| c. Have any fenceposts been damaged or their anchoring weakened? | | X | |
| d. Are all use restriction signs legible? | | X | 5 faded signs |
| e. How many damaged or missing use restriction signs need to be replaced? | 5 | | Faded signs should be replaced |
| f. How many use restriction signs are down or loose and need to be re-hung? | 0 | | |
| g. Do any Underground Radioactive Material Area signs need to be replaced or re-hung? | | X | |
| h. Is there damage to any of the subsidence survey markers? | | X | |
| i. Is there standing water within the fenced area? | | X | |
| j. Is there trash or other debris within the fenced area? | | X | |
| 3. Waste Unit Cover: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | | X | |

POST-CLOSURE INSPECTION CHECKLIST**CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)**

- b. Is there evidence of erosion (wind or water)?
- c. Is there evidence of human intrusion onto the site?
- d. Is there evidence of large animal intrusion onto the site?
- e. Is there evidence of animal burrowing?
- f. Is there vegetation growing on the cover?
- g. Is there standing water on the cover?
- h. Are there any other issues not specifically described in this checklist?

X

X

X

X

X

X

X

vegetation should be removed

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Four from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

- a. Have all required photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling less than 2 inches deep on the cover) required?
2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (i.e., are there cracks greater than 2 inches deep on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 2 inches deep on the cover shall be completed within 60 days of discovery.
3. Is there an imminent hazard to the integrity of the landfill cover?

X

X

X

4. Field Conclusions/Recommendations:

Vegetation should be removed. No other problems.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 6/27/16

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Steve Felton

Date: 6/27/16

Printed Name: STEVE FELTON

POST-CLOSURE INSPECTION CHECKLIST**CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)**

| | |
|--|--|
| Inspection Date: 12/8/16 | Reason for Inspection: Semi-Annual |
| If this inspection is for a rain event, date of event: NA | Quantity of Rainfall: NA inches NA |
| Date of Last Post-Closure Inspection: 6/23/16 | Reason for Last Post-Closure Inspection: Semi Annual |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed. J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: Juan Alvarado | Title: Environmental Scientist II |
| Assistant Inspector: Steve Felton | Title: Environmental Scientist IV |

A. GENERAL INSTRUCTIONS

- 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.
- 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. 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.

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

YES NO EXPLANATION (required if shaded box is checked)

1. Were anomalies or trends detected on previous inspections?

X

Vegetation removed and 5 new signs

2. Were maintenance or repair activities performed since the last inspection?

X

5 signs replaced on 8/12/16, and Herbicide on 10/4/16

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

NA

X

b. If yes (to 2a), are revised as-built plans available that reflect repair changes?

NA

X

C. SITE INSPECTION (To be completed during the site visit)

1. Adjacent Offsite Features:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Are there any new activities or offsite features that could potentially affect the site?

X

2. Site Markers:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Is there damage to the gate or gate lock?

X

b. Is there damage to or a break in the fence?

X

c. Have any fenceposts been damaged or their anchoring weakened?

X

d. Are all use restriction signs legible?

X

e. How many damaged or missing use restriction signs need to be replaced?

0

f. How many use restriction signs are down or loose and need to be re-hung?

0

g. Do any Underground Radioactive Material Area signs need to be replaced or re-hung?

X

h. Is there damage to any of the subsidence survey markers?

X

i. Is there standing water within the fenced area?

X

j. Is there trash or other debris within the fenced area?

X

3. Waste Unit Cover:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Is there evidence of settling or cracking?

X

POST-CLOSURE INSPECTION CHECKLIST**CAU 92, AREA 6 DECON POND FACILITY – CAS 06-05-02, DECONTAMINATION POND (RCRA)**

- b. Is there evidence of erosion (wind or water)?
- c. Is there evidence of human intrusion onto the site?
- d. Is there evidence of large animal intrusion onto the site?
- e. Is there evidence of animal burrowing?
- f. Is there vegetation growing on the cover?
- g. Is there standing water on the cover?
- h. Are there any other issues not specifically described in this checklist?

✓

✓

✓

✓

✓

✓

✓

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Four from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

- a. Have all required photographs of the site been taken?

✓

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling less than 2 inches deep on the cover) required?
2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (i.e., are there cracks greater than 2 inches deep on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 2 inches deep on the cover shall be completed within 60 days of discovery.
3. Is there an imminent hazard to the integrity of the landfill cover?

✓

✓

✓

4. Field Conclusions/Recommendations: *The site is in generally good condition. Some small plants are visible (spruce) appear to be dead. No issues*

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Juan J. Alvarado

Date: 12/8/16

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Dawn Siekerman

Date: 2-2-17

Printed Name: *Dawn Siekerman*

CAU 110 Inspection Checklists

Note: The enclosed Post-Closure Inspection Checklist performed December 1, 2015, was completed as a quarterly inspection; however, on December 10, 2015, the inspection frequency was changed to semiannual.

POST-CLOSURE INSPECTION CHECKLIST

CAU 110, AREA 3 WMD U-3AX/BL CRATER – CAS 03-23-04, U-3AXBL SUBSIDENCE CRATER

| | |
|---|--|
| Inspection Date: 12/1/15 | Reason for Inspection: Quarterly |
| Date of Last Post-Closure Inspection: 9/14/15 | Reason for Last Post-Closure Inspection: Quarterly |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J Petrellio | Title: Task Lead |
| Assistant Inspector: M Loeschner | Title: Environmental Scientist #1 |

A. GENERAL INSTRUCTIONS

1/10/2017

- 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.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|----|---|
| 1. Were anomalies or trends detected on previous inspections? | | X | |
| 2. Were maintenance or repair activities performed since the last inspection? | | X | |
| a. If yes, has repair resulted in a change from as-built conditions? | | NA | X |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | NA | X |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | | X | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there damage to the gate or gate lock? | | X | |
| b. Is there damage to or a break in the fence? | | X | |
| c. Have any fenceposts been damaged or their anchoring weakened? | | X | |
| d. Are all use restriction signs legible? | X | | |
| e. How many damaged or missing use restriction signs need to be replaced? | 0 | | |
| f. How many use restriction signs are down or loose and need to be re-hung? | 0 | | |
| g. Do any Underground Radioactive Material Area signs need to be replaced or re-hung? | | X | |
| h. Is there damage to any of the subsidence survey markers? | | X | |
| i. Is there any evidence that TDR probes have been disturbed or the wires damaged? | | X | |
| j. Is there trash or other debris within the fenced area? | | X | |
| 3. Waste Unit Cover: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | X | | cracks/settling on east side |

POST-CLOSURE INSPECTION CHECKLIST

CAU 110, AREA 3 WMD U-3AX/BL CRATER – CAS 03-23-04, U-3AXBL SUBSIDENCE CRATER

b. Is there evidence of erosion (wind or water)?

X

minor on south side

c. Is there evidence of human intrusion onto the site?

X

d. Is there evidence of large animal intrusion onto the site?

X

e. Is there evidence of animal burrowing?

X

f. Is there a change in the vegetation growing on the cover?

X

g. Are there any other issues not specifically described in this checklist?

X

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Four from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have all required photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 6 inches deep that extend less than 3 feet on the cover) required?

X

2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 6 inches deep and 3 feet long on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 6 inches deep and 3 feet long on the cover shall be completed within 60 days of discovery.

X

Two areas of subsidence - one is in southeast corner and one on east side need repair

3. Is there an imminent hazard to the integrity of the landfill cover?

X

4. Field Conclusions/Recommendations: Minor erosion on south side of cover does not require repair at this time. Subsidence holes and cracks have appeared on the cover requiring repair. All signs and fencing are in good condition, no problems

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 12/1/15

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Matt Loeschner

Date: 12/1/15

Printed Name: M. Loeschner

POST-CLOSURE INSPECTION CHECKLIST

CAU 110, AREA 3 WMD U-3AX/BL CRATER – CAS 03-23-04, U-3AXBL SUBSIDENCE CRATER

| | |
|---|--|
| Inspection Date: 6/22/16 | Reason for Inspection: semi-annual |
| Date of Last Post-Closure Inspection: 12/1/15 | Reason for Last Post-Closure Inspection: Semi-annual |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J Petreillo | Title: Task Lead |
| Assistant Inspector: S Felton | Title: ENVIRONMENTAL SCIENTIST |

A. GENERAL INSTRUCTIONS

- 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.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-------------------------------------|-------------------------------------|---|
| 1. Were anomalies or trends detected on previous inspections? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | cracks/settling |
| 2. Were maintenance or repair activities performed since the last inspection? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | crack/settling repair |
| a. If yes, has repair resulted in a change from as-built conditions? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | NA |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | NA |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-------------------------------------|-------------------------------------|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there damage to the gate or gate lock? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| b. Is there damage to or a break in the fence? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| c. Have any fenceposts been damaged or their anchoring weakened? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| d. Are all use restriction signs legible? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | sign on south side fading but legible |
| e. How many damaged or missing use restriction signs need to be replaced? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| f. How many use restriction signs are down or loose and need to be re-hung? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 0 |
| g. Do any Underground Radioactive Material Area signs need to be replaced or re-hung? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| h. Is there damage to any of the subsidence survey markers? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| i. Is there any evidence that TDR probes have been disturbed or the wires damaged? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| j. Is there trash or other debris within the fenced area? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Waste Unit Cover: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

POST-CLOSURE INSPECTION CHECKLIST

CAU 110, AREA 3 WMD U-3AX/BL CRATER – CAS 03-23-04, U-3AXBL SUBSIDENCE CRATER

- b. Is there evidence of erosion (wind or water)?
- c. Is there evidence of human intrusion onto the site?
- d. Is there evidence of large animal intrusion onto the site?
- e. Is there evidence of animal burrowing?
- f. Is there a change in the vegetation growing on the cover?
- g. Are there any other issues not specifically described in this checklist?

X

X

X

X

X

X

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Four from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

- a. Have all required photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 6 inches deep that extend less than 3 feet on the cover) required?
2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 6 inches deep and 3 feet long on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 6 inches deep and 3 feet long on the cover shall be completed within 60 days of discovery.
3. Is there an imminent hazard to the integrity of the landfill cover?

X

X

X

4. Field Conclusions/Recommendations:

No problems. cover, fence, gate, & signs in good condition.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 6/23/16

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Steve Felton

Date: 6/27/16

Printed Name:

STEVE FELTON

POST-CLOSURE INSPECTION CHECKLIST

CAU 110, AREA 3 WMD U-3AX/BL CRATER – CAS 03-23-04, U-3AXBL SUBSIDENCE CRATER

Inspection Date: 12/6/16

Reason for Inspection: Semi-Annual

Date of Last Post-Closure Inspection: 6/22/16

Reason for Last Post-Closure Inspection: Semi-Annual

Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada

Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project

Chief Inspector: Juan Alvarado

Title: Environmental Scientist II

Assistant Inspector: Steve Felton

Title: Environmental Scientist IV

A. GENERAL INSTRUCTIONS

- 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.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

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

YES NO EXPLANATION (required if shaded box is checked)

1. Were anomalies or trends detected on previous inspections?

☒ X

2. Were maintenance or repair activities performed since the last inspection?

☒ X

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

☒ NA

b. If yes (to 2a), are revised as-built plans available that reflect repair changes?

☒ NA

C. SITE INSPECTION (To be completed during the site visit)

1. Adjacent Offsite Features:

YES NO EXPLANATION (required if shaded box is checked)

a. Are there any new activities or offsite features that could potentially affect the site?

☒ ✓

2. Site Markers:

YES NO EXPLANATION (required if shaded box is checked)

a. Is there damage to the gate or gate lock?

☒ ✓

b. Is there damage to or a break in the fence?

☒ ✓

c. Have any fenceposts been damaged or their anchoring weakened?

☒ ✓

d. Are all use restriction signs legible?

☒ ✓

e. How many damaged or missing use restriction signs need to be replaced?

3

black lettering faded

f. How many use restriction signs are down or loose and need to be re-hung?

0

g. Do any Underground Radioactive Material Area signs need to be replaced or re-hung?

☒ ✓

h. Is there damage to any of the subsidence survey markers?

☒ ✓

i. Is there any evidence that TDR probes have been disturbed or the wires damaged?

☒ ✓

j. Is there trash or other debris within the fenced area?

☒ ✓

3. Waste Unit Cover:

YES NO EXPLANATION (required if shaded box is checked)

a. Is there evidence of settling or cracking?

☒ ✓

POST-CLOSURE INSPECTION CHECKLIST

CAU 110, AREA 3 WMD U-3AX/BL CRATER – CAS 03-23-04, U-3AXBL SUBSIDENCE CRATER

b. Is there evidence of erosion (wind or water)?

✓

c. Is there evidence of human intrusion onto the site?

✓

d. Is there evidence of large animal intrusion onto the site?

✓

e. Is there evidence of animal burrowing?

✓

3 areas of small burrows

f. Is there a change in the vegetation growing on the cover?

✓

g. Are there any other issues not specifically described in this checklist?

✓

Photograph Instructions:

- The following photographs must be taken during each inspection:
 - Four from the center of the unit, one in each compass direction (i.e., N, S, E, W)
 - Four of the unit from outside the fence, one in each compass direction (i.e., N, S, E, W)
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have all required photographs of the site been taken?

✓

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 6 inches deep that extend less than 3 feet on the cover) required?

✓

2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 6 inches deep and 3 feet long on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 6 inches deep and 3 feet long on the cover shall be completed within 60 days of discovery.

✓

3. Is there an imminent hazard to the integrity of the landfill cover?

✓

4. Field Conclusions/Recommendations: Although there are signs of small burrowing animals no maintenance or repairs are needed for the burrowing animals. Three signs need to be replaced (South sign, SE sign, and west sign) due to faded black.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Juan J. Alvarado

Date: 12/6/16

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Dawn Siekerman

Date: 2-2-17

Printed Name: Dawn Siekerman

CAU 111 Inspection Checklists

POST-CLOSURE INSPECTION CHECKLIST

CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS

| | |
|---|--|
| Inspection Date: 10/19/15 | Reason for Inspection: RAIN EVENT |
| If this inspection is for a rain event, date of event: 10/17-10/18 | Quantity of Rainfall: 1.22 inches |
| Date of Last Post-Closure Inspection: 9/14/15 | Reason for Last Post-Closure Inspection: QUARTERLY |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: Jaelyn Petrellio | Title: TASK LEAD |
| Assistant Inspector: JEFF HOUGHTON | Title: RADIATION CONTROL TECHNICIAN |

A. GENERAL INSTRUCTIONS

- 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. Complete this checklist during the site inspection.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

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

| | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|----|---|
| 1. Were anomalies or trends detected on previous inspections? | | X | |
| 2. Were maintenance or repair activities performed since the last inspection? | | X | |
| a. If yes, has repair resulted in a change from as-built conditions? | | NA | X |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | NA | X |

C. SITE INSPECTION (To be completed during the site visit)

| | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| 1. Adjacent Offsite Features: | | | |
| a. Are there any new activities or offsite features that could potentially affect the site? | | X | |
| 2. Site Markers: | | | |
| a. Are all use restriction signs legible? | X | | |
| b. How many damaged or missing use restriction signs need to be replaced? | | 0 | |
| c. How many use restriction signs are down or loose and need to be re-hung? | | 0 | |
| d. Is there damage to any of the monuments? | | X | |
| 3. Waste Unit Covers: | | | |
| a. Is there evidence of settling or cracking? | | X | |
| b. Is there evidence of erosion (wind or water)? | X | | channeling on sides - all covers |
| c. Is there evidence of human intrusion onto the site? | | X | |
| d. Is there evidence of large animal intrusion onto the site? | | X | |
| e. Is there evidence of animal burrowing? | | X | |
| f. Is there a change in the vegetation growing on the cover? | | X | |

POST-CLOSURE INSPECTION CHECKLIST**CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS**

g. Is there trash or debris on the cover?

X

h. Are there any other issues not specifically described in this checklist?

X

Photograph Instructions:

- A standard set of photographs is needed for the post-closure report. Photos are required to be taken from the approximate location where photos were taken the previous year (as found in the previous year's post-closure report).
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have all required photographs of the site been taken?

X

DAMAGED AREAS ONLY

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 15 centimeters deep that extend less than 1 meter on the cover) required?

X

2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 15 centimeters deep and 1 meter long on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 15 centimeters deep and 1 meter long on the cover shall be completed within 60 days of discovery. Damaged or missing UR warning signs will be repaired or replaced within 60 days of discovery.

X

LARGE CHANNELS ON SIDE SLOPES OF ALL COVERS REQUIRE REPAIR

3. Is there an imminent hazard to the integrity of the landfill cover?

X

4. Field Conclusions/Recommendations: EROSION ON SIDE SLOPES OF ALL COVERS REQUIRE REPAIR.**E. CERTIFICATION:** I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 10/19/15

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Jeff Houghton

Date: 10-19-15

Printed Name: JEFF HOUGHTON

POST-CLOSURE INSPECTION CHECKLIST**CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS**

| | |
|---|--|
| Inspection Date: 12/1/15 | Reason for Inspection: Quarterly |
| If this inspection is for a rain event, date of event: NA | Quantity of Rainfall: NA inches |
| Date of Last Post-Closure Inspection: 10/19/15 | Reason for Last Post-Closure Inspection: RAINFALL EVENT |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J PETRELLI | Title: TASK LEAD |
| Assistant Inspector: M LOESCHNER | Title: ENVIRONMENTAL SCIENTIST |

A. GENERAL INSTRUCTIONS

- 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. Complete this checklist during the site inspection.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-------------------------------------|-------------------------------------|---|
| 1. Were anomalies or trends detected on previous inspections? | <input checked="" type="checkbox"/> | | EROSION & SUBSIDENCE |
| 2. Were maintenance or repair activities performed since the last inspection? | <input checked="" type="checkbox"/> | | EROSION & SUBSIDENCE REPAIR |
| a. If yes, has repair resulted in a change from as-built conditions? | | <input checked="" type="checkbox"/> | NA |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | <input checked="" type="checkbox"/> | NA |

| C. SITE INSPECTION (To be completed during the site visit) | | | |
|---|-------------------------------------|-------------------------------------|--|
| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Are there any new activities or offsite features that could potentially affect the site? | | <input checked="" type="checkbox"/> | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Are all use restriction signs legible? | <input checked="" type="checkbox"/> | | |
| b. How many damaged or missing use restriction signs need to be replaced? | | <input checked="" type="checkbox"/> | |
| c. How many use restriction signs are down or loose and need to be re-hung? | | <input checked="" type="checkbox"/> | |
| d. Is there damage to any of the monuments? | | <input checked="" type="checkbox"/> | |
| 3. Waste Unit Covers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | <input checked="" type="checkbox"/> | | |
| b. Is there evidence of erosion (wind or water)? | <input checked="" type="checkbox"/> | | |
| c. Is there evidence of human intrusion onto the site? | | <input checked="" type="checkbox"/> | |
| d. Is there evidence of large animal intrusion onto the site? | | <input checked="" type="checkbox"/> | |
| e. Is there evidence of animal burrowing? | | <input checked="" type="checkbox"/> | |
| f. Is there a change in the vegetation growing on the cover? | <input checked="" type="checkbox"/> | | Vegetation on north cover has died where herbicide was applied. |

POST-CLOSURE INSPECTION CHECKLIST**CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS**

g. Is there trash or debris on the cover?

X

h. Are there any other issues not specifically described in this checklist?

X

Photograph Instructions:

- A standard set of photographs is needed for the post-closure report. Photos are required to be taken from the approximate location where photos were taken the previous year (as found in the previous year's post-closure report).
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have all required photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 15 centimeters deep that extend less than 1 meter on the cover) required?

X

2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 15 centimeters deep and 1 meter long on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 15 centimeters deep and 1 meter long on the cover shall be completed within 60 days of discovery. Damaged or missing UR warning signs will be repaired or replaced within 60 days of discovery.

X

Subsidence & cracking on north north, south, and west cover. erosion on south cover.

3. Is there an imminent hazard to the integrity of the landfill cover?

X

4. Field Conclusions/Recommendations:

Subsidence and cracking on north-north cover in one location, south cover in three locations, and west cover in 8 locations. Erosion on west side of south cover, on top of cover. All signs and monuments are in good condition, no problems. Vegetation on north-south cover has died where herbicide was applied.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 12/1/15

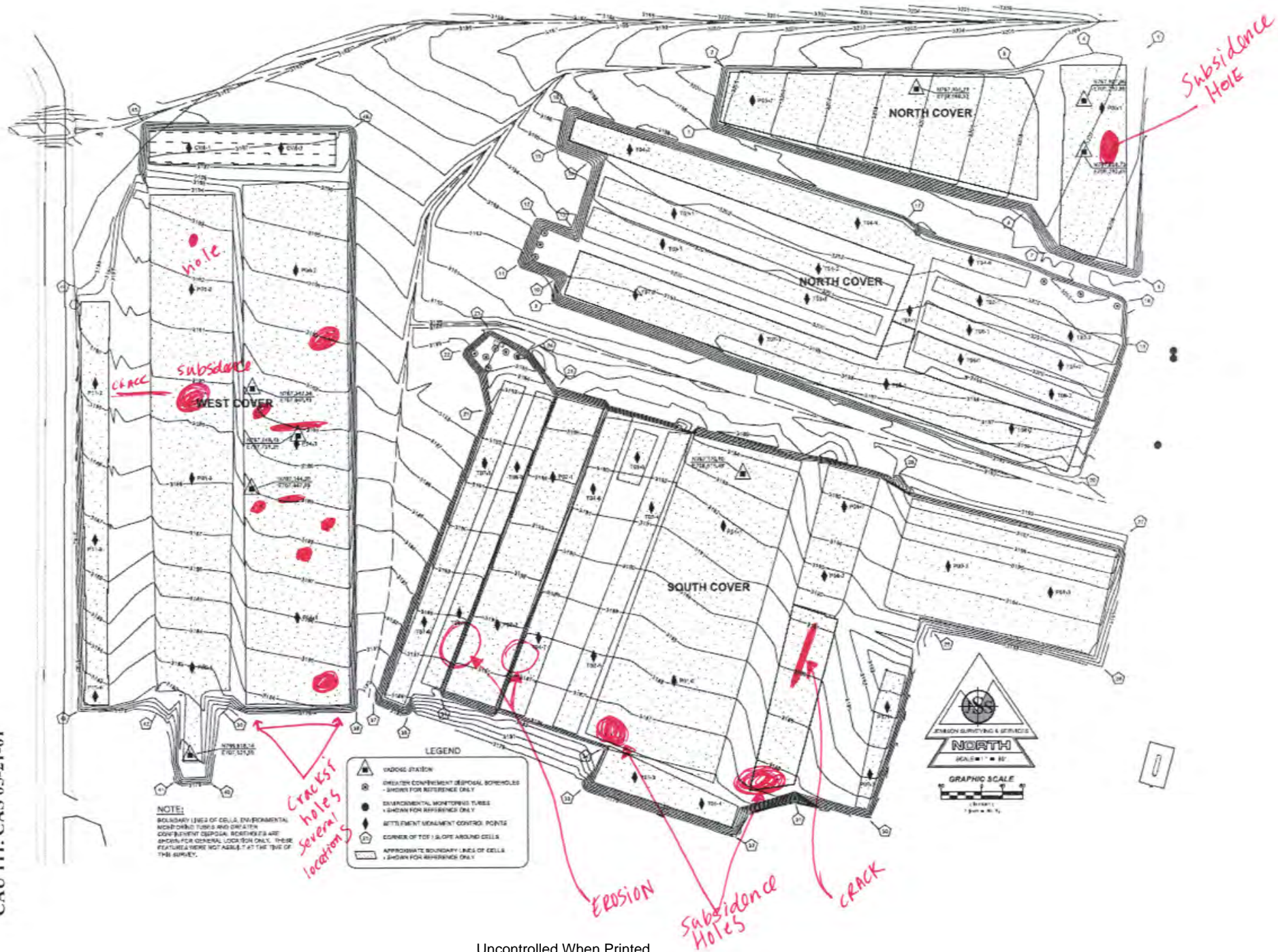
F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Matt Loeschner

Date: 12/1/15

Printed Name:

M. Loeschner



POST-CLOSURE INSPECTION CHECKLIST**CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS**

| | |
|---|---|
| Inspection Date: <u>3/2/16</u> | Reason for Inspection: <u>Quarterly</u> |
| If this inspection is for a rain event, date of event: | Quantity of Rainfall: <u>NA</u> inches |
| Date of Last Post-Closure Inspection: <u>12/1/15</u> | Reason for Last Post-Closure Inspection: <u>Quarterly</u> |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: <u>J Petrelio</u> | Title: <u>TASK LEAD</u> |
| Assistant Inspector: <u>D Siekerman</u> | Title: <u>Environmental Scientist</u> |

A. GENERAL INSTRUCTIONS

- 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. Complete this checklist during the site inspection.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

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

YES NO EXPLANATION (required if shaded box is checked)

1. Were anomalies or trends detected on previous inspections?

☒Subsidence & cracking

2. Were maintenance or repair activities performed since the last inspection?

☒Subsidence & crack repair

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

☒NA

b. If yes (to 2a), are revised as-built plans available that reflect repair changes?

☒NA**C. SITE INSPECTION** (To be completed during the site visit)

1. Adjacent Offsite Features:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Are there any new activities or offsite features that could potentially affect the site?

☒X

2. Site Markers:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Are all use restriction signs legible?

☒X

b. How many damaged or missing use restriction signs need to be replaced?

0

c. How many use restriction signs are down or loose and need to be re-hung?

0

d. Is there damage to any of the monuments?

☒X

3. Waste Unit Covers:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Is there evidence of settling or cracking?

☒NORTH-NORTH COVER, SOUTH COVER, WEST COVER, SEE ATTACHED

b. Is there evidence of erosion (wind or water)?

☒X

c. Is there evidence of human intrusion onto the site?

☒X

d. Is there evidence of large animal intrusion onto the site?

☒X

e. Is there evidence of animal burrowing?

☒BURROWING HAS INCREASED ON N-NORTH & WEST COVER

f. Is there a change in the vegetation growing on the cover?

☒X

POST-CLOSURE INSPECTION CHECKLIST**CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS**

g. Is there trash or debris on the cover?

X

h. Are there any other issues not specifically described in this checklist?

X

Photograph Instructions:

- A standard set of photographs is needed for the post-closure report. Photos are required to be taken from the approximate location where photos were taken the previous year (as found in the previous year's post-closure report).
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have all required photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 15 centimeters deep that extend less than 1 meter on the cover) required?

X

Burrows & minor cracks do not require repair at this time

2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 15 centimeters deep and 1 meter long on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 15 centimeters deep and 1 meter long on the cover shall be completed within 60 days of discovery. Damaged or missing UR warning signs will be repaired or replaced within 60 days of discovery.

X

Long crack on N-North cover AND several cracks/Holes on South and west covers meet repair requirements.

3. Is there an imminent hazard to the integrity of the landfill cover?

X

4. Field Conclusions/Recommendations:

Cracks on N-North, South, & West cover require repair, see attached for locations. Animal burrows have increased on NORTH-NORTH cover AND WEST cover BUT DO NOT REQUIRE REPAIR AT THIS TIME. NO OTHER PROBLEMS.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date:

3/3/16

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Dawn Siekerman

Date:

3/3/16

Printed Name:

Dawn Siekerman

cracks

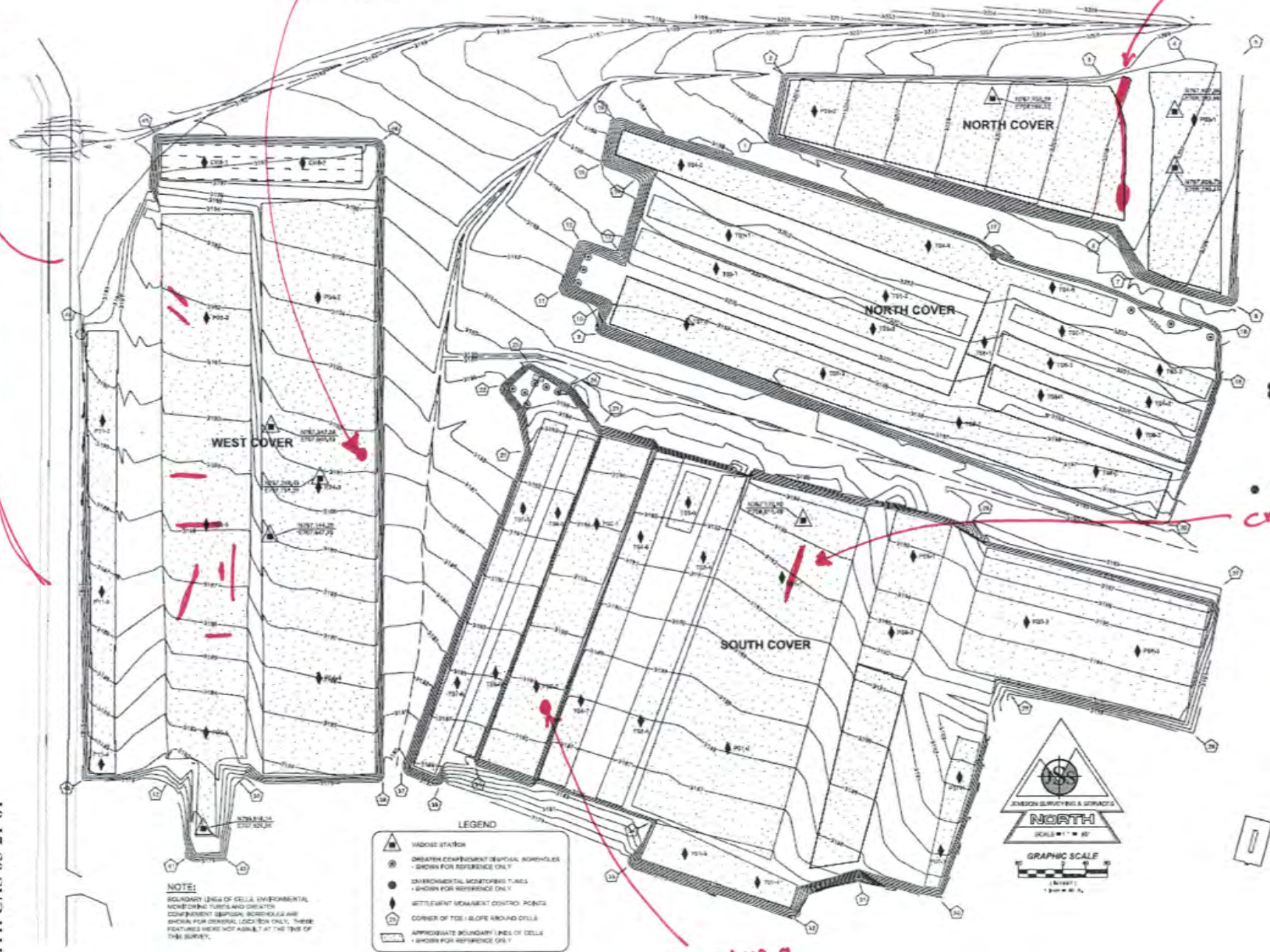
hole. small diameter but deep (2+ ft)
~5 ft from side of cover

crack

crack

Subsiden a

CAU 111. CAS 05-21-01



POST-CLOSURE INSPECTION CHECKLIST

CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS

| | |
|---|--|
| Inspection Date: 6/22/14 | Reason for Inspection: QUARTERLY |
| If this inspection is for a rain event, date of event: NA | Quantity of Rainfall: NA inches |
| Date of Last Post-Closure Inspection: 3/2/14 | Reason for Last Post-Closure Inspection: QUARTERLY |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J PETRELLIO | Title: TASK LEAD |
| Assistant Inspector: S FELTON | Title: ENVIRONMENTAL SCIENTIST |

A. GENERAL INSTRUCTIONS

- 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. Complete this checklist during the site inspection.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-------------------------------------|-------------------------------------|---|
| 1. Were anomalies or trends detected on previous inspections? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | subsidence & cracking |
| 2. Were maintenance or repair activities performed since the last inspection? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | subsidence & crack repair |
| a. If yes, has repair resulted in a change from as-built conditions? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | NA |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | NA |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-------------------------------------|-------------------------------------|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Are all use restriction signs legible? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| b. How many damaged or missing use restriction signs need to be replaced? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| c. How many use restriction signs are down or loose and need to be re-hung? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| d. Is there damage to any of the monuments? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Waste Unit Covers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | WEST & SOUTH COVER see attached |
| b. Is there evidence of erosion (wind or water)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | EROSION ON SOUTH COVER |
| c. Is there evidence of human intrusion onto the site? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| d. Is there evidence of large animal intrusion onto the site? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e. Is there evidence of animal burrowing? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| f. Is there a change in the vegetation growing on the cover? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |

POST-CLOSURE INSPECTION CHECKLIST

CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS

g. Is there trash or debris on the cover?

X

h. Are there any other issues not specifically described in this checklist?

X

Photograph Instructions:

- A standard set of photographs is needed for the post-closure report. Photos are required to be taken from the approximate location where photos were taken the previous year (as found in the previous year's post-closure report).
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have all required photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 15 centimeters deep that extend less than 1 meter on the cover) required?

X

small cracks on West cover & on south cover
see attached

2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 15 centimeters deep and 1 meter long on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 15 centimeters deep and 1 meter long on the cover shall be completed within 60 days of discovery. Damaged or missing UR warning signs will be repaired or replaced within 60 days of discovery.

X

cracks > 1m long and 15cm deep on West & south cover

3. Is there an imminent hazard to the integrity of the landfill cover?

X

4. Field Conclusions/Recommendations:

Cracks on West & south cover requiring repairs (>1m long, 15cm deep). Smaller cracks on the west cover not requiring repair should be watched at future inspections. Erosion on the south cover should also be monitored. Location of all cracks & erosion shown in attached figure. No other problems.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 6/23/16

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Steve Felton

Date: 6/27/16

Printed Name: STEVE FELTON

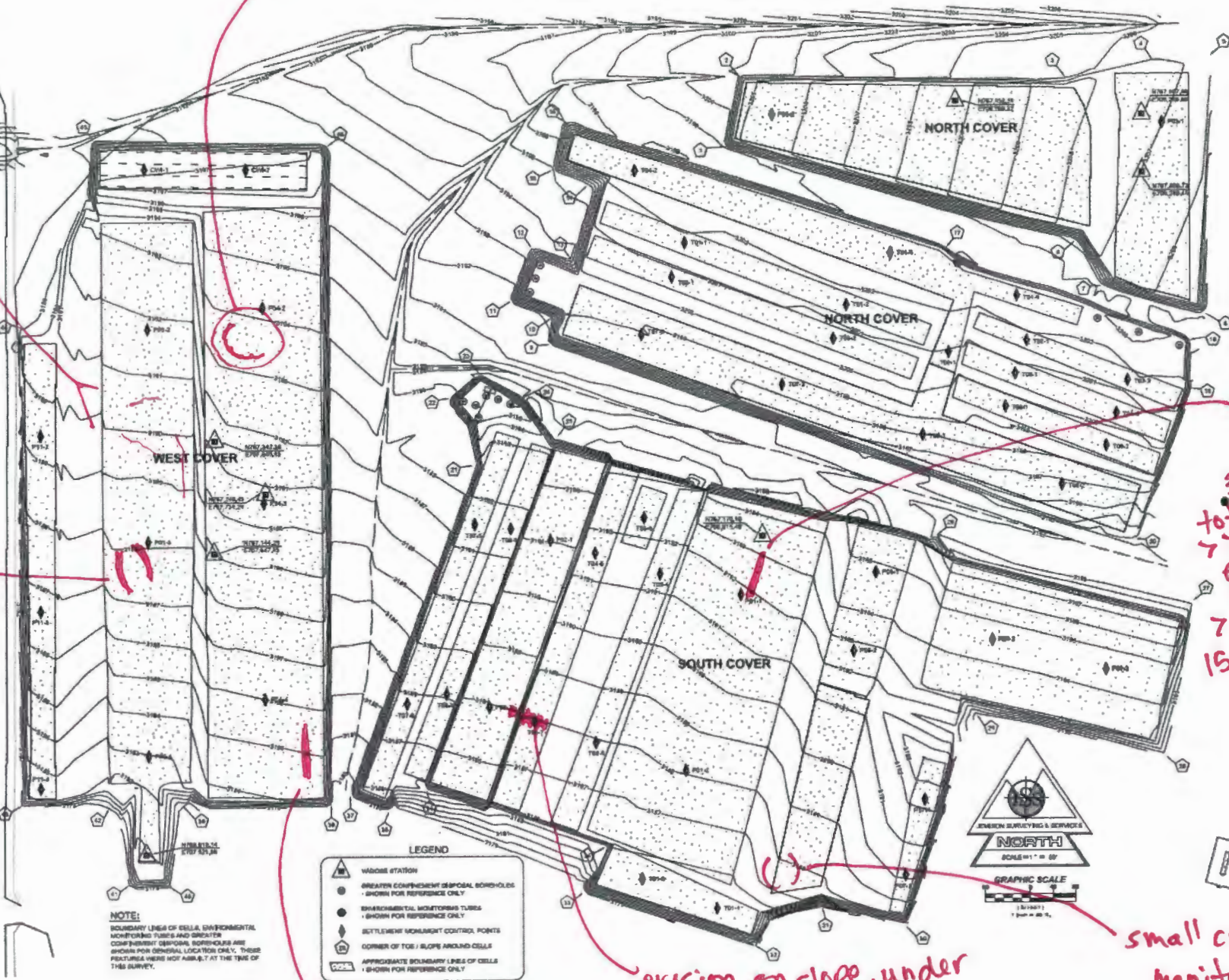
2 cracks, each deep
>1m long

small housekeeping/
monitor

crack > 1 m long 15 cm deep

3 cracks
totaling
77.5 m long
each
crack
71 m long
15 cm deep

small cracks,
monitor.



crack > 1 m long
15 cm deep

erosion on slope, under
irrigation hose.
housekeeping / monitor

POST-CLOSURE INSPECTION CHECKLIST**CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS**

| | |
|---|---|
| Inspection Date: <u>9/19/16</u> | Reason for Inspection: <u>QUARTERLY</u> |
| If this inspection is for a rain event, date of event: <u>NA</u> | Quantity of Rainfall: <u>NA</u> inches |
| Date of Last Post-Closure Inspection: <u>6/22/14</u> | Reason for Last Post-Closure Inspection: <u>QUARTERLY</u> |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: <u>STEVE FELTON</u> | Title: <u>TASK LEAD</u> |
| Assistant Inspector: <u>JOHN LONDERGAN</u> | Title: <u>GEOLOGIST</u> |

A. GENERAL INSTRUCTIONS

- 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. Complete this checklist during the site inspection.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-------------------------------------|-------------------------------------|---|
| 1. Were anomalies or trends detected on previous inspections? | <input checked="" type="checkbox"/> | | <u>CRACKS ON WEST CAP</u> |
| 2. Were maintenance or repair activities performed since the last inspection? | <input checked="" type="checkbox"/> | | <u>MAINTENANCE WAS PERFORMED</u> |
| a. If yes, has repair resulted in a change from as-built conditions? | | <input checked="" type="checkbox"/> | <u>NA</u> |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | <input checked="" type="checkbox"/> | <u>NA</u> |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-------------------------------------|-------------------------------------|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | | <input checked="" type="checkbox"/> | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Are all use restriction signs legible? | <input checked="" type="checkbox"/> | | |
| b. How many damaged or missing use restriction signs need to be replaced? | <u>0</u> | | |
| c. How many use restriction signs are down or loose and need to be re-hung? | <u>0</u> | | |
| d. Is there damage to any of the monuments? | | <input checked="" type="checkbox"/> | |
| 3. Waste Unit Covers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | <input checked="" type="checkbox"/> | | <u>3 CRACKS ON WEST CAP</u> |
| b. Is there evidence of erosion (wind or water)? | | <input checked="" type="checkbox"/> | |
| c. Is there evidence of human intrusion onto the site? | | <input checked="" type="checkbox"/> | |
| d. Is there evidence of large animal intrusion onto the site? | | <input checked="" type="checkbox"/> | |
| e. Is there evidence of animal burrowing? | | <input checked="" type="checkbox"/> | |
| f. Is there a change in the vegetation growing on the cover? | | <input checked="" type="checkbox"/> | |

POST-CLOSURE INSPECTION CHECKLIST

CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS

g. Is there trash or debris on the cover?

X

h. Are there any other issues not specifically described in this checklist?

X

Photograph Instructions:

- A standard set of photographs is needed for the post-closure report. Photos are required to be taken from the approximate location where photos were taken the previous year (as found in the previous year's post-closure report).
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have all required photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 15 centimeters deep that extend less than 1 meter on the cover) required?

X

2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 15 centimeters deep and 1 meter long on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 15 centimeters deep and 1 meter long on the cover shall be completed within 60 days of discovery. Damaged or missing UR warning signs will be repaired or replaced within 60 days of discovery.

X

CRACKS LOCATED ON WEST CAP.
> 1 M LONG AND 15 CM DEEP

3. Is there an imminent hazard to the integrity of the landfill cover?

X

4. Field Conclusions/Recommendations:

NONE - ALL CRACKS ARE NOTED ON ATTACHED FIGURE.

9/16 Cracks will need to be repaired.

1/10/2017

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Steve Felton

Date: 9/19/14

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ John Londergan

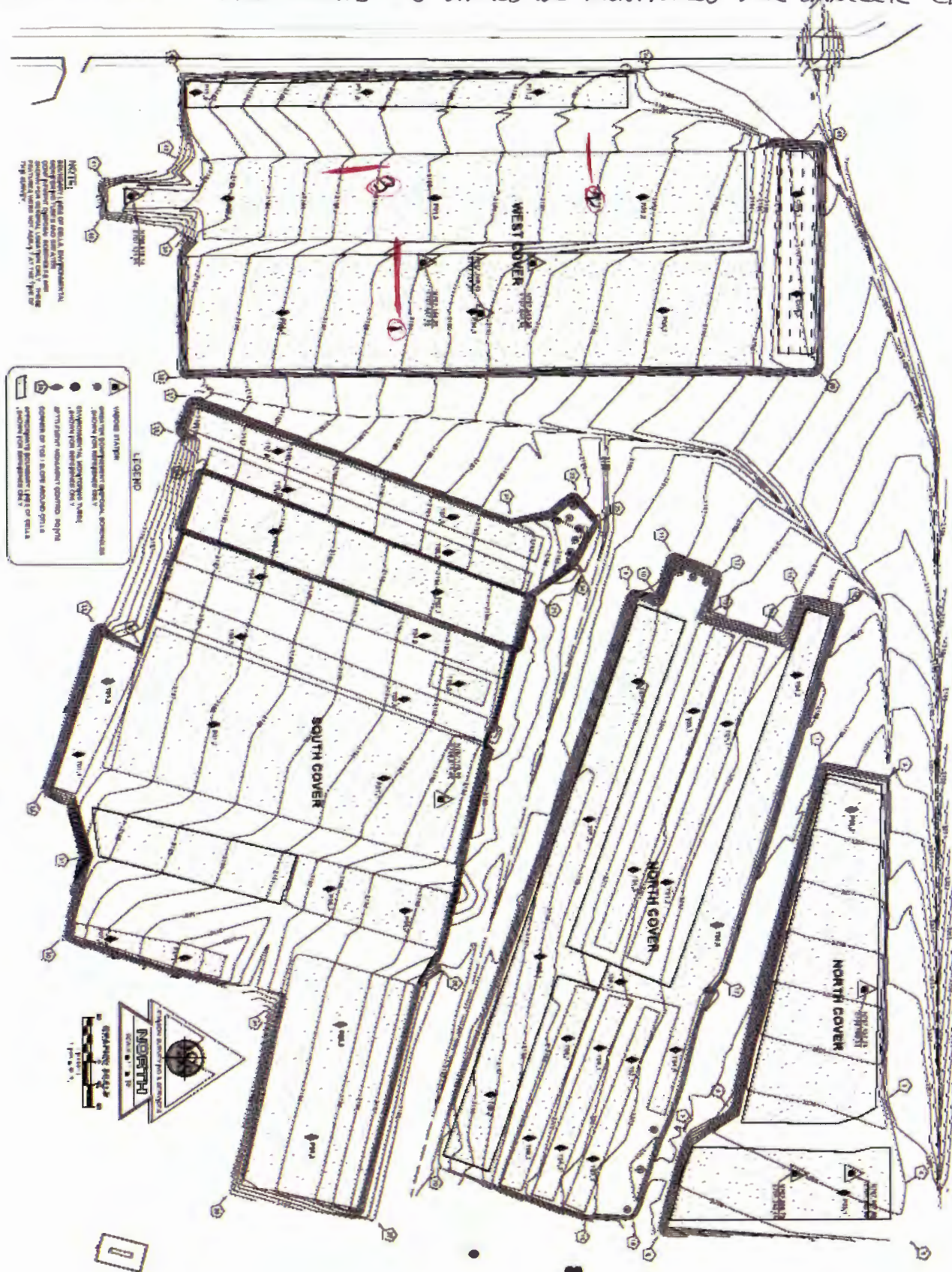
Date: 9/19/16

Printed Name:

John Londergan

CAU 111. CAS 05-21-01

ALL 3 LOCATIONS ARE CRACKS > 1m LONG & 15 cm DEEP
AREA AROUND #3 SHOULD BE MONITORED FOR SMALLER CRACKS



POST-CLOSURE INSPECTION CHECKLIST**CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS**

| | |
|---|---|
| Inspection Date: <u>12/6/16</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>N/A</u> inches <u>N/A</u> |
| Date of Last Post-Closure Inspection: <u>9/19/16</u> | Reason for Last Post-Closure Inspection: <u>Quarterly</u> |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: <u>Juan Alvarado</u> | Title: <u>Environmental Scientist II</u> |
| Assistant Inspector: <u>Steve Felton</u> | Title: <u>Environmental Scientist IV</u> |

A. GENERAL INSTRUCTIONS

- 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. Complete this checklist during the site inspection.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

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

| | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-------------------------------------|-------------------------------------|---|
| 1. Were anomalies or trends detected on previous inspections? | <input checked="" type="checkbox"/> | | <u>Cracks on the west cover</u> |
| 2. Were maintenance or repair activities performed since the last inspection? | <input checked="" type="checkbox"/> | | <u>Repairs completed by 10/26/16</u> |
| a. If yes, has repair resulted in a change from as-built conditions? | | <input checked="" type="checkbox"/> | NA |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | | NA |

C. SITE INSPECTION (To be completed during the site visit)

| | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-------------------------------------|-------------------------------------|---|
| 1. Adjacent Offsite Features: | | | |
| a. Are there any new activities or offsite features that could potentially affect the site? | <input checked="" type="checkbox"/> | | |
| 2. Site Markers: | | | |
| a. Are all use restriction signs legible? | <input checked="" type="checkbox"/> | | |
| b. How many damaged or missing use restriction signs need to be replaced? | | <input checked="" type="checkbox"/> | <u>0</u> |
| c. How many use restriction signs are down or loose and need to be re-hung? | | <input checked="" type="checkbox"/> | <u>0</u> |
| d. Is there damage to any of the monuments? | | <input checked="" type="checkbox"/> | |
| 3. Waste Unit Covers: | | | |
| a. Is there evidence of settling or cracking? | <input checked="" type="checkbox"/> | | <u>subsidence/cracking below on the south, west and north-north cover</u> |
| b. Is there evidence of erosion (wind or water)? | | <input checked="" type="checkbox"/> | |
| c. Is there evidence of human intrusion onto the site? | | <input checked="" type="checkbox"/> | |
| d. Is there evidence of large animal intrusion onto the site? | | <input checked="" type="checkbox"/> | |
| e. Is there evidence of animal burrowing? | <input checked="" type="checkbox"/> | | <u>small animals burrowing no impact on integrity of cover, no issue.</u> |
| f. Is there a change in the vegetation growing on the cover? | | <input checked="" type="checkbox"/> | |

2/8/17
MAM

POST-CLOSURE INSPECTION CHECKLIST**CAU 111, AREA 5 WMD RETIRED MIXED WASTE PITS – CAS 05-21-01, MIXED WASTE PITS**

g. Is there trash or debris on the cover?



h. Are there any other issues not specifically described in this checklist?



Photograph Instructions:

- A standard set of photographs is needed for the post-closure report. Photos are required to be taken from the approximate location where photos were taken the previous year (as found in the previous year's post-closure report).
- Photographs should also be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION (required if shaded box is checked)

a. Have all required photographs of the site been taken?



minor runnels along edge critical (work)

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is general housekeeping or minor repair (including cracks or settling imperfections less than 15 centimeters deep that extend less than 1 meter on the cover) required?



subsidence cracks/holes in south, west and north-north covers see map

2. Are there deficiencies that require a remedy other than general housekeeping or minor repair? (For example, are there cracks greater than 15 centimeters deep and 1 meter long on the cover?) Maintenance or repairs of cracks or settling imperfections greater than 15 centimeters deep and 1 meter long on the cover shall be completed within 60 days of discovery. Damaged or missing UR warning signs will be repaired or replaced within 60 days of discovery.



3. Is there an imminent hazard to the integrity of the landfill cover?



4. Field Conclusions/Recommendations:

North ^{dec 12/16} cover - cover is in good condition no issuesNorth ^{dec 12/16} cover - one crack (series of cracks) in the NE quadrant (J)

South cover - A few cracks near inside corner at hand you handle (A)

West cover - many cracks on the west side of the cover (D-I) a series of cracks near the center (B) and a subsidence depression ⁱⁿ along the NE quadrant _{12/16}

Repairs to the North cover, south cover and west cover will be needed

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Juan J. Alvarado

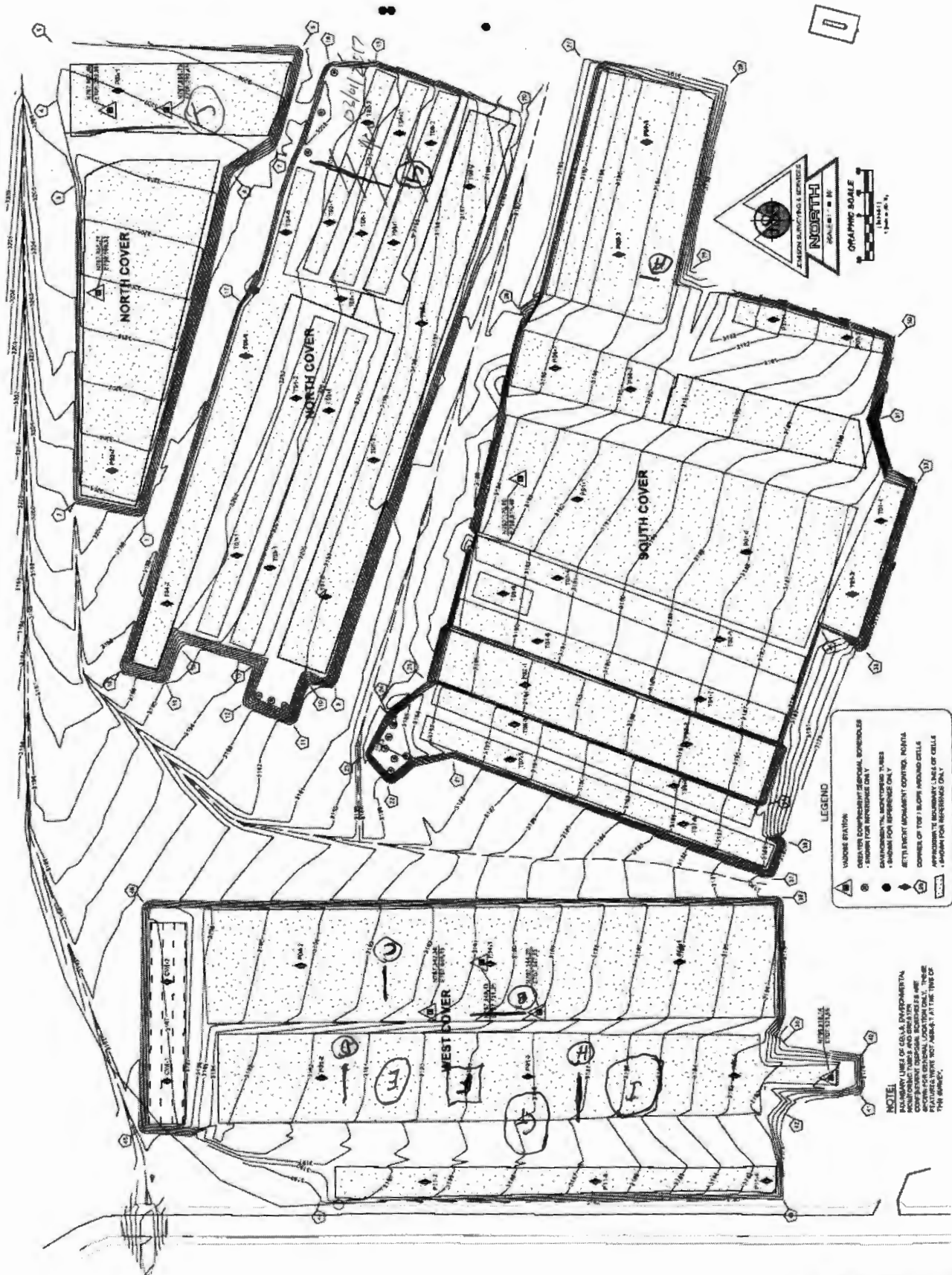
Date: 12/6/16

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Dawn Siekerman

Date: 2-2-17

Printed Name: Dawn Siekerman



CAU 111. CAS 05-21-01

CAU 112 Inspection Checklist

Note: The enclosed Post-Closure Inspection Checklist was completed as a quarterly inspection; however, on December 10, 2015, the inspection frequency was changed to annual.

POST-CLOSURE INSPECTION CHECKLIST

CAU 112, AREA 23 HAZARDOUS WASTE TRENCHES –
CAS 23-21-02, AREA 23 HAZ. WASTE TRENCHES (RCRA)

| | |
|---|--|
| Inspection Date: 12/1/15 | Reason for Inspection: QUARTERLY |
| Date of Last Post-Closure Inspection: 9/15/15 | Reason for Last Post-Closure Inspection: QUARTERLY |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: J Petrello | Title: TASK LEAD |
| Assistant Inspector: M LOESCHNER | Title: ENVIRONMENTAL SCIENTIST |

A. GENERAL INSTRUCTIONS

- 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.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|----|---|
| 1. Were anomalies or trends detected on previous inspections? | | X | |
| 2. Were maintenance or repair activities performed since the last inspection? | | X | |
| a. If yes, has repair resulted in a change from as-built conditions? | | NA | X |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | NA | X |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | | X | |
| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there damage to the gate or gate lock? | | X | |
| b. Is there damage to or a break in the fence? | | X | |
| c. Have any fenceposts been damaged or their anchoring weakened? | | X | |
| d. Are all use restriction signs legible? | X | | |
| e. How many damaged or missing use restriction signs need to be replaced? | | 0 | |
| f. How many use restriction signs are down or loose and need to be re-hung? | | 0 | |
| g. Is there damage to any of the monuments? | | X | |
| h. Have neutron access pads been disturbed? | | X | |
| i. Are well covers for neutron access tubes broken, lost, or otherwise damaged? | | X | |
| 3. Waste Unit Covers: | YES | NO | EXPLANATION (required if shaded box is checked) |
| a. Is there evidence of settling or cracking? | | X | |
| b. Is there evidence of erosion (wind or water)? | | X | |

POST-CLOSURE INSPECTION CHECKLIST

CAU 112, AREA 23 HAZARDOUS WASTE TRENCHES –
CAS 23-21-02, AREA 23 HAZ. WASTE TRENCHES (RCRA)

- c. Is there evidence of human intrusion onto the site?
- d. Is there evidence of large animal intrusion onto the site?
- e. Is there evidence of animal burrowing?
- f. Is there vegetation growing on the cover?
- g. Is there trash or debris within the fenced area?
- h. Are there any other issues not specifically described in this checklist?

X

X

X

X

X

X

Photograph Instructions:

- Photographs should be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Other photographs are optional.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION

- a. Have photographs of the site been taken?

X

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is there an imminent hazard to the integrity of the landfill cover?

X

2. Field Conclusions and Repair or Maintenance Recommendations:

Cover, signs, posts, fencing, and gate in good condition, no problems.

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Jackie Petrello

Date: 12/1/15

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Matt Loeschner

Date: 12/1/15

Printed Name: M. Loeschner

POST-CLOSURE INSPECTION CHECKLIST

**CAU 112, AREA 23 HAZARDOUS WASTE TRENCHES –
CAS 23-21-02, AREA 23 HAZ. WASTE TRENCHES (RCRA)**

| | |
|---|--|
| Inspection Date: 12/8/16 | Reason for Inspection: ANNUAL |
| Date of Last Post-Closure Inspection: 12/1/15 | Reason for Last Post-Closure Inspection: Annual |
| Responsible Entity: Navarro, Nevada National Security Site, Mercury, Nevada | |
| Responsible Facility Owner: Reed J. Poderis, Project Manager, Industrial Sites, Environmental Restoration Project | |
| Chief Inspector: Juan Alvarez | Title: Environmental Scientist II |
| Assistant Inspector: Steve Felton | Title: Environmental Scientist IV |

A. GENERAL INSTRUCTIONS

- 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.
- All documentation must be legible and clear. Complete all checklist items.
- 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. 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.

| B. PREPARATION (To be completed prior to the site visit) | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|---------|---|
| 1. Were anomalies or trends detected on previous inspections? | | X | |
| 2. Were maintenance or repair activities performed since the last inspection? | | X | |
| a. If yes, has repair resulted in a change from as-built conditions? | | NA X | |
| b. If yes (to 2a), are revised as-built plans available that reflect repair changes? | | NA X | |

C. SITE INSPECTION (To be completed during the site visit)

| 1. Adjacent Offsite Features: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| a. Are there any new activities or offsite features that could potentially affect the site? | | X | |

| 2. Site Markers: | YES | NO | EXPLANATION (required if shaded box is checked) |
|---|-----|----|---|
| a. Is there damage to the gate or gate lock? | | X | |
| b. Is there damage to or a break in the fence? | | X | |
| c. Have any fenceposts been damaged or their anchoring weakened? | | X | |
| d. Are all use restriction signs legible? | X | | |
| e. How many damaged or missing use restriction signs need to be replaced? | | 0 | |
| f. How many use restriction signs are down or loose and need to be re-hung? | | 0 | |
| g. Is there damage to any of the monuments? | | X | |
| h. Have neutron access pads been disturbed? | | X | |
| i. Are well covers for neutron access tubes broken, lost, or otherwise damaged? | | X | |

| 3. Waste Unit Covers: | YES | NO | EXPLANATION (required if shaded box is checked) |
|--|-----|----|---|
| a. Is there evidence of settling or cracking? | | X | |
| b. Is there evidence of erosion (wind or water)? | | X | |

45-17
23-17
2016

POST-CLOSURE INSPECTION CHECKLIST

**CAU 112, AREA 23 HAZARDOUS WASTE TRENCHES –
CAS 23-21-02, AREA 23 HAZ. WASTE TRENCHES (RCRA)**

- c. Is there evidence of human intrusion onto the site?
- d. Is there evidence of large animal intrusion onto the site?
- e. Is there evidence of animal burrowing?
- f. Is there vegetation growing on the cover?
- g. Is there trash or debris within the fenced area?
- h. Are there any other issues not specifically described in this checklist?

X

X

X

X

X

X

Photograph Instructions:

- Photographs should be taken to document maintenance/repair needs, anomalous features, or new features (such as changes in adjacent area land use). These will be used to plan maintenance/repair activities and are not intended for use in the annual post-closure report.
- Other photographs are optional.
- Photographs will be filed electronically.

4. Photograph Documentation:

YES

NO

EXPLANATION

- a. Have photographs of the site been taken?

X

A leachate mound

D. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Is there an imminent hazard to the integrity of the landfill cover?

X

2. Field Conclusions and Repair or Maintenance Recommendations:

Generally the site is in good condition, one mound is leaching (but not greatly). No issues

E. CERTIFICATION: I have conducted this inspection in accordance with the post-closure requirements as recorded on this checklist and attachments.

Chief Inspector's Signature: /s/ Juan J. Alvarado

Date: 12/8/16

F. VERIFICATION: I have reviewed this checklist and attachments and have verified that they are complete.

Signature: /s/ Dawn Sickerman

Date: 2/2/2017

Printed Name: Dawn Sickerman

Appendix B

Photographs

Table B-1
Key to Appendix B Photographs
(Page 1 of 5)

| CAU | Date | Photo Number | Description |
|-----|------------|--------------|----------------------------|
| 90 | 12/03/2015 | 1 | CAS 02-20-01, Facing North |
| | | 2 | CAS 02-20-01, Facing East |
| | | 3 | CAS 02-20-01, Facing South |
| | | 4 | CAS 02-20-03, Facing South |
| | | 5 | CAS 02-20-03, Facing West |
| | | 6 | CAS 02-20-03, Facing North |
| | 12/08/2016 | 7 | CAS 02-20-01, Facing North |
| | | 8 | CAS 02-20-01, Facing East |
| | | 9 | CAS 02-20-01, Facing South |
| | | 10 | CAS 02-20-03, Facing South |
| | | 11 | CAS 02-20-03, Facing West |
| | | 12 | CAS 02-20-03, Facing North |
| 91 | 06/23/2016 | 13 | Facing North from Inside |
| | | 14 | Facing West from Inside |
| | | 15 | Facing South from Inside |
| | | 16 | Facing East from Inside |
| | | 17 | Facing North from Outside |
| | | 18 | Facing East from Outside |
| | | 19 | Facing South from Outside |
| | | 20 | Facing West from Outside |

Table B-1
Key to Appendix B Photographs
(Page 2 of 5)

| CAU | Date | Photo Number | Description |
|-----|------------|--------------|---|
| 92 | 12/03/2015 | 21 | Facing North from Inside |
| | | 22 | Facing East from Inside |
| | | 23 | Facing South from Inside (PHOTO NOT AVAILABLE) |
| | | 24 | Facing West from Inside |
| | | 25 | Facing North from Outside |
| | | 26 | Facing East from Outside |
| | | 27 | Facing South from Outside (PHOTO NOT AVAILABLE) |
| | | 28 | Facing West from Outside |
| | 06/23/2016 | 29 | Facing Northeast from Inside |
| | | 30 | Facing Southeast from Inside |
| | | 31 | Facing Southwest from Inside |
| | | 32 | Facing Northwest from Inside |
| | | 33 | Facing Northeast from Outside |
| | | 34 | Facing Southeast from Outside |
| | | 35 | Facing Southwest from Outside |
| | | 36 | Facing Northwest from Outside |
| | 12/08/2016 | 37 | Facing North from Inside |
| | | 38 | Facing East from Inside |
| | | 39 | Facing South from Inside |
| | | 40 | Facing West from Inside |
| | | 41 | Facing North from Outside |
| | | 42 | Facing East from Outside |
| | | 43 | Facing South from Outside |
| | | 44 | Facing West from Outside |

Table B-1
Key to Appendix B Photographs
(Page 3 of 5)

| CAU | Date | Photo Number | Description |
|-----|------------|--------------|-------------------------------|
| 110 | 12/01/2015 | 45 | Facing North from Inside |
| | | 46 | Facing Northeast from Inside |
| | | 47 | Facing South from Inside |
| | | 48 | Facing Southwest from Inside |
| | | 49 | Facing North from Outside |
| | | 50 | Facing Northeast from Outside |
| | | 51 | Facing South from Outside |
| | | 52 | Facing West from Outside |
| | 06/22/2016 | 53 | Facing North from Inside |
| | | 54 | Facing South from Inside |
| | | 55 | Facing East from Inside |
| | | 56 | Facing West from Inside |
| | | 57 | Facing East from Outside |
| | | 58 | Facing North from Outside |
| | | 59 | Facing West from Outside |
| | | 60 | Facing Southwest from Outside |
| | 12/06/2016 | 61 | Facing North from Inside |
| | | 62 | Facing East from Inside |
| | | 63 | Facing South from Inside |
| | | 64 | Facing West from Inside |
| | | 65 | Facing North from Outside |
| | | 66 | Facing East from Outside |
| | | 67 | Facing South from Outside |
| | | 68 | Facing West from Outside |

Table B-1
Key to Appendix B Photographs
(Page 4 of 5)

| CAU | Date | Photo Number | Description |
|-----|------------|--------------|------------------------------------|
| 111 | 12/01/2015 | 69 | Facing Northwest |
| | | 70 | Facing Southeast |
| | | 71 | Facing Southeast |
| | | 72 | Facing East |
| | | 73 | Facing Southeast |
| | | 74 | Facing North |
| | | 75 | Facing Northeast |
| | | 76 | Facing Northwest |
| | | 77 | Arizona Crossing Facing West |
| | 03/02/2016 | 78 | Facing Northwest |
| | | 79 | Facing Southeast |
| | | 80 | Facing Southeast |
| | | 81 | Facing East |
| | | 82 | Facing Southeast |
| | | 83 | Facing North (PHOTO NOT AVAILABLE) |
| | | 84 | Facing Northeast |
| | | 85 | Facing Northwest |
| | | 86 | Arizona Crossing Facing West |
| | 06/22/2016 | 87 | Facing Northwest |
| | | 88 | Facing Southeast |
| | | 89 | Facing Southeast |
| | | 90 | Facing East |
| | | 91 | Facing Southeast |
| | | 92 | Facing North |
| | | 93 | Facing Northeast |
| | | 94 | Facing Northwest |
| | | 95 | Arizona Crossing Facing West |

Table B-1
Key to Appendix B Photographs
(Page 5 of 5)

| CAU | Date | Photo Number | Description |
|-----|------------|--------------|------------------------------|
| 111 | 09/19/2016 | 96 | Facing Northwest |
| | | 97 | Facing Southeast |
| | | 98 | Facing Southeast |
| | | 99 | Facing East |
| | | 100 | Facing Southeast |
| | | 101 | Facing North |
| | | 102 | Facing Northeast |
| | | 103 | Facing Northwest |
| | | 104 | Arizona Crossing Facing West |
| | 12/06/2016 | 105 | Facing Northwest |
| | | 106 | Facing East |
| | | 107 | Facing Southeast |
| | | 108 | Facing East |
| | | 109 | Facing Southeast |
| | | 110 | Facing North |
| | | 111 | Facing North |
| | | 112 | Facing Northwest |
| | | 113 | Arizona Crossing Facing West |
| 112 | 12/01/2015 | 114 | Facing Southwest |
| 112 | 12/08/2016 | 115 | Facing Southwest |

Uncontrolled When Printed

WARNING
This land is privately owned
and access is restricted.
No hunting or other activities
are permitted without written permission.
Violators will be prosecuted.

Uncontrolled When Printed



Figure B-5
Photograph 5: CAU 90, CAS 02-20-03, Facing West (12/03/2015)



Figure B-6
Photograph 6: CAU 90, CAS 02-20-03, Facing North (12/03/2015)



Figure B-7
Photograph 7: CAU 90, CAS 02-20-01, Facing North (12/08/2016)



Figure B-8
Photograph 8: CAU 90, CAS 02-20-01, Facing East (12/08/2016)



Figure B-9
Photograph 9: CAU 90, CAS 02-20-01, Facing South (12/08/2016)



Figure B-10
Photograph 10: CAU 90, CAS 02-20-03, Facing South (12/08/2016)



Figure B-11
Photograph 11: CAU 90, CAS 02-20-03, Facing West (12/08/2016)



Figure B-12
Photograph 12: CAU 90, CAS 02-20-03, Facing North (12/08/2016)



Figure B-13
Photograph 13: CAU 91, Facing North from Inside (06/23/2016)



Figure B-14
Photograph 14: CAU 91, Facing West from Inside (06/23/2016)

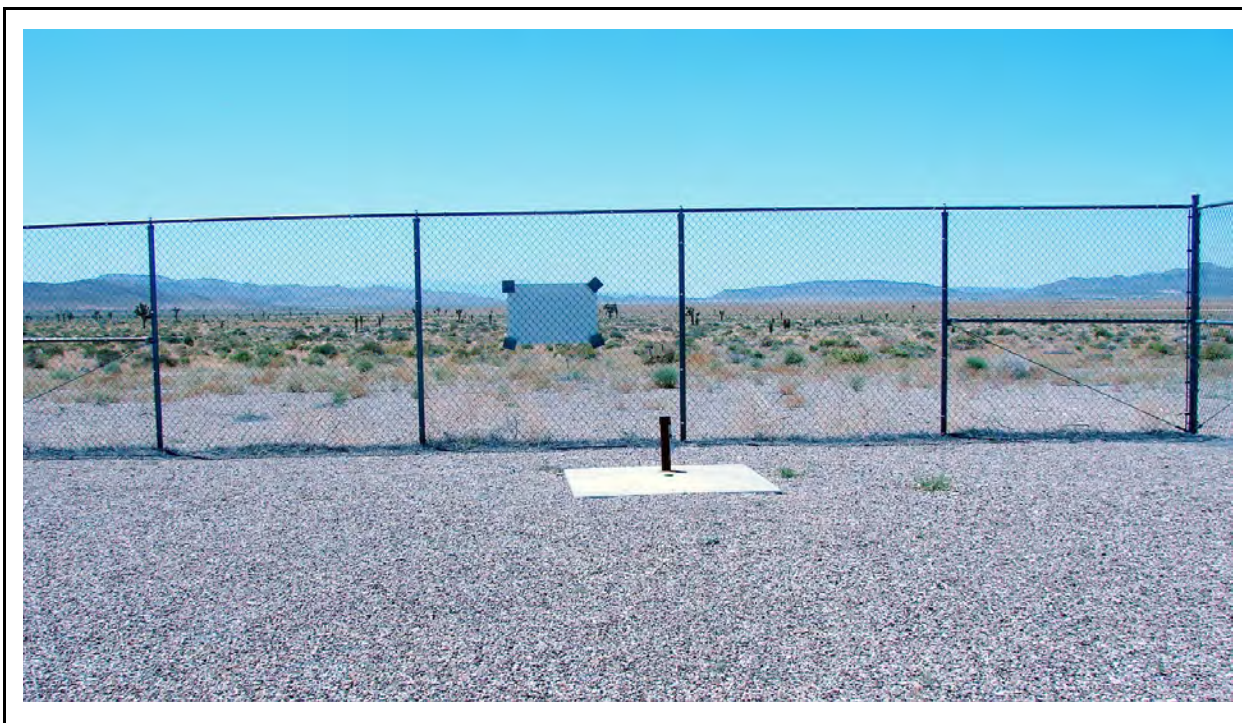


Figure B-15
Photograph 15: CAU 91, Facing South from Inside (06/23/2016)



Figure B-16
Photograph 16: CAU 91, Facing East from Inside (06/23/2016)



Figure B-17
Photograph 17: CAU 91, Facing North from Outside (06/23/2016)



Figure B-18
Photograph 18: CAU 91, Facing East from Outside (06/23/2016)



Figure B-19
Photograph 19: CAU 91, Facing South from Outside (06/23/2016)



Figure B-20
Photograph 20: CAU 91, Facing West from Outside (06/23/2016)



Figure B-21
Photograph 21: CAU 92, Facing North from Inside (12/03/2015)



Figure B-22
Photograph 22: CAU 92, Facing East from Inside (12/03/2015)

FACING SOUTH FROM INSIDE

Figure B-23
Photograph 23: CAU 92, Photo Not Available (12/03/2015)

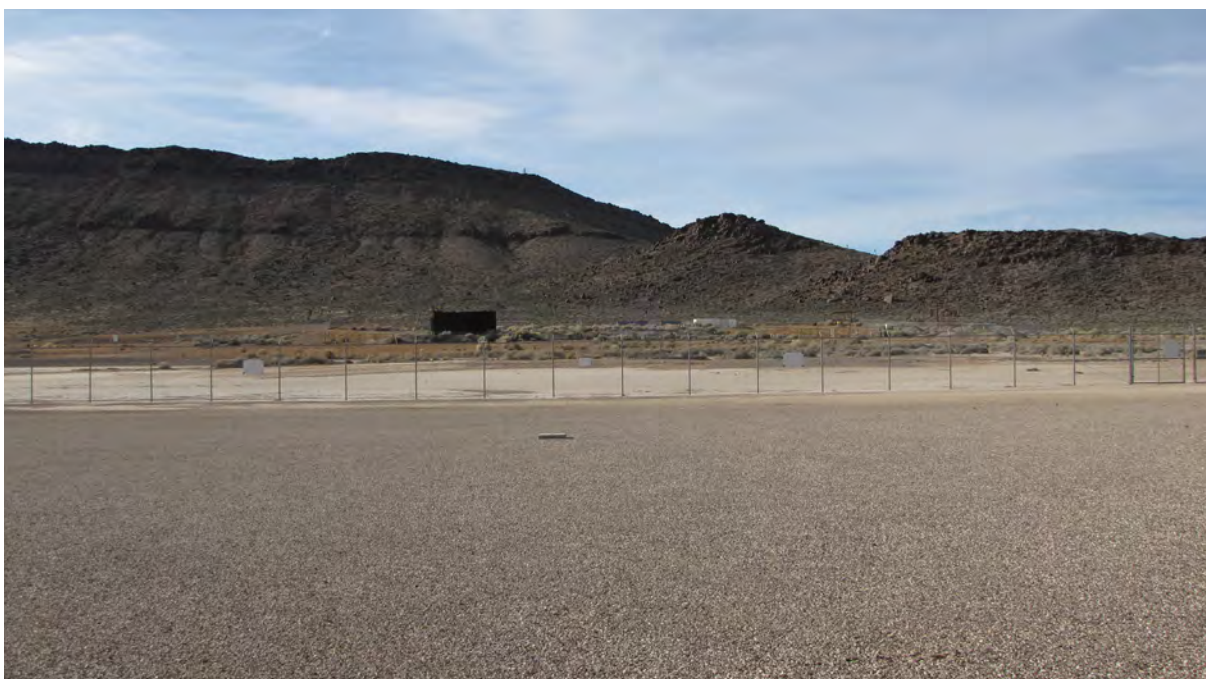


Figure B-24
Photograph 24: CAU 92, Facing West from Inside (12/03/2015)



Figure B-25
Photograph 25: CAU 92, Facing North from Outside (12/03/2015)



Figure B-26
Photograph 26: CAU 92, Facing East from Outside (12/03/2015)

FACING SOUTH FROM OUTSIDE

Figure B-27
Photograph 27: CAU 92, Photo Not Available (12/03/2015)



Figure B-28
Photograph 28: CAU 92, Facing West from Outside (12/03/2015)



Figure B-29
Photograph 29: CAU 92, Facing Northeast from Inside (06/23/2016)



Figure B-30
Photograph 30: CAU 92, Facing Southeast from Inside (06/23/2016)



Figure B-31
Photograph 31: CAU 92, Facing Southwest from Inside (06/23/2016)



Figure B-32
Photograph 32: CAU 92, Facing Northwest from Inside (06/23/2016)



Figure B-33
Photograph 33: CAU 92, Facing Northeast from Outside (06/23/2016)



Figure B-34
Photograph 34: CAU 92, Facing Southeast from Outside (06/23/2016)



Figure B-35
Photograph 35: CAU 92, Facing Southwest from Outside (06/23/2016)



Figure B-36
Photograph 36: CAU 92, Facing Northwest from Outside (06/23/2016)



Figure B-37
Photograph 37: CAU 92, Facing North from Inside (12/08/2016)



Figure B-38
Photograph 38: CAU 92, Facing East from Inside (12/08/2016)



Figure B-39
Photograph 39: CAU 92, Facing South from Inside (12/08/2016)



Figure B-40
Photograph 40: CAU 92, Facing West from Inside (12/08/2016)



Figure B-41
Photograph 41: CAU 92, Facing North from Outside (12/08/2016)



Figure B-42
Photograph 42: CAU 92, Facing East from Outside (12/08/2016)



Figure B-43
Photograph 43: CAU 92, Facing South from Outside (12/08/2016)



Figure B-44
Photograph 44: CAU 92, Facing West from Outside (12/08/2016)



Figure B-45
Photograph 45: CAU 110, Facing North from Inside (12/01/2015)



Figure B-46
Photograph 46: CAU 110, Facing Northeast from Inside (12/01/2015)



Figure B-47
Photograph 47: CAU 110, Facing South from Inside (12/01/2015)



Figure B-48
Photograph 48: CAU 110, Facing Southwest from Inside (12/01/2015)



Figure B-49
Photograph 49: CAU 110, Facing North from Outside (12/01/2015)



Figure B-50
Photograph 50: CAU 110, Facing Northeast from Outside (12/01/2015)



Figure B-51
Photograph 51: CAU 110, Facing South from Outside (12/01/2015)



Figure B-52
Photograph 52: CAU 110, Facing West from Outside (12/01/2015)



Figure B-53
Photograph 53: CAU 110, Facing North from Inside (06/22/2016)



Figure B-54
Photograph 54: CAU 110, Facing South from Inside (06/22/2016)



Figure B-55
Photograph 55: CAU 110, Facing East from Inside (06/22/2016)



Figure B-56
Photograph 56: CAU 110, Facing West from Inside (06/22/2016)



Figure B-57
Photograph 57: CAU 110, Facing East from Outside (06/22/2016)



Figure B-58
Photograph 58: CAU 110, Facing North from Outside (06/22/2016)



Figure B-59
Photograph 59: CAU 110, Facing West from Outside (06/22/2016)



Figure B-60
Photograph 60: CAU 110, Facing Southwest from Outside (06/22/2016)



Figure B-61
Photograph 61: CAU 110, Facing North from Inside (12/06/2016)



Figure B-62
Photograph 62: CAU 110, Facing East from Inside (12/06/2016)



Figure B-63
Photograph 63: CAU 110, Facing South from Outside (12/06/2016)



Figure B-64
Photograph 64: CAU 110, Facing West from Outside (12/06/2016)



Figure B-65
Photograph 65: CAU 110, Facing North from Outside (12/06/2016)



Figure B-66
Photograph 66: CAU 110, Facing East from Outside (12/06/2016)



Figure B-67
Photograph 67: CAU 110, Facing South from Outside (12/06/2016)



Figure B-68
Photograph 68: CAU 110, Facing West from Outside (12/06/2016)



Figure B-69
Photograph 69: CAU 111, Facing Northwest (12/01/2015)



Figure B-70
Photograph 70: CAU 111, Facing Southeast (12/01/2015)



Figure B-71
Photograph 71: CAU 111, Facing Southeast (12/01/2015)



Figure B-72
Photograph 72: CAU 111, Facing East (12/01/2015)



Figure B-73
Photograph 73: CAU 111, Facing Southeast (12/01/2015)

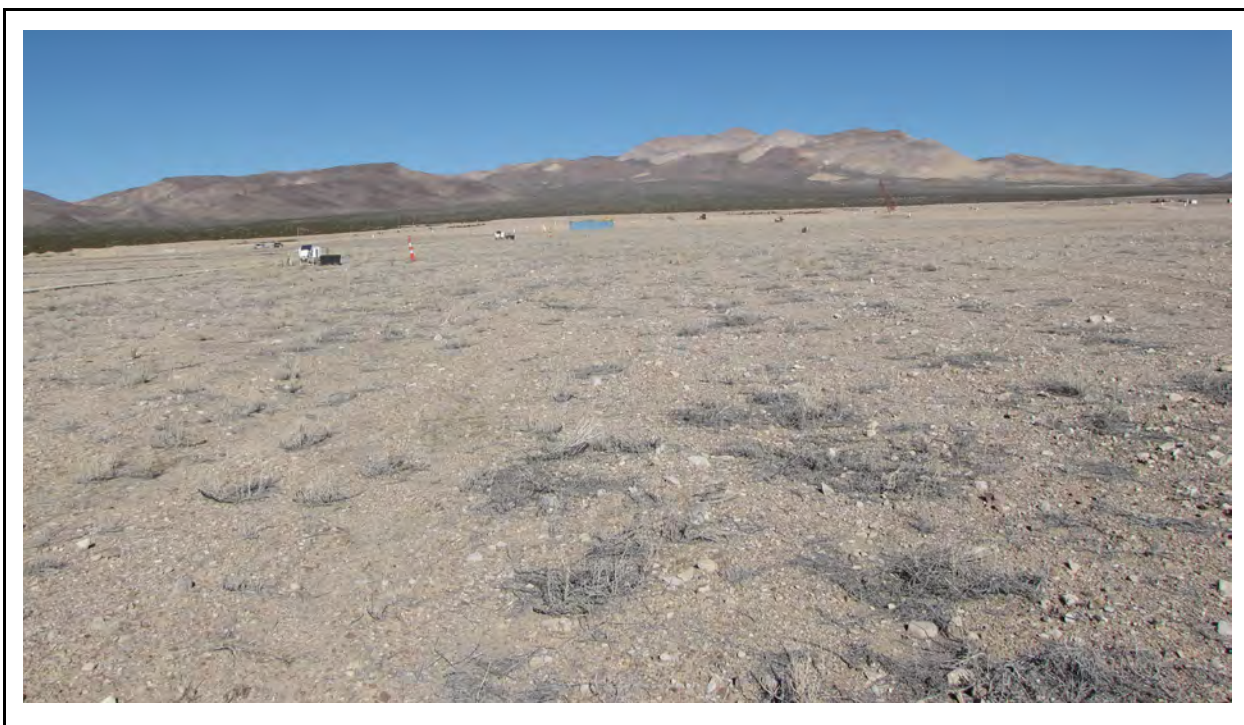


Figure B-74
Photograph 74: CAU 111, Facing North (12/01/2015)



Figure B-75
Photograph 75: CAU 111, Facing Northeast (12/01/2015)



Figure B-76
Photograph 76: CAU 111, Facing Northwest (12/01/2015)



Figure B-77
Photograph 77: CAU 111, Arizona Crossing Facing West (12/01/2015)



Figure B-78
Photograph 78: CAU 111, Facing Northwest (03/02/2016)



Figure B-79
Photograph 79: CAU 111, Facing Southeast (03/02/2016)



Figure B-80
Photograph 80: CAU 111, Facing Southeast (03/02/2016)



Figure B-81
Photograph 81: CAU 111, Facing East (03/02/2016)



Figure B-82
Photograph 82: CAU 111, Facing Southeast (03/02/2016)

FACING NORTH

Figure B-83
Photograph 83: CAU 111, Photo Not Available (03/02/2016)



Figure B-84
Photograph 84: CAU 111, Facing Northeast (03/02/2016)



Figure B-85
Photograph 85: CAU 111, Facing Northwest (03/02/2016)



Figure B-86
Photograph 86: CAU 111, Arizona Crossing Facing West (03/02/2016)



Figure B-87
Photograph 87: CAU 111, Facing Northwest (06/22/2016)



Figure B-88
Photograph 88: CAU 111, Facing Southeast (06/22/2016)



Figure B-89
Photograph 89: CAU 111, Facing Southeast (06/22/2016)



Figure B-90
Photograph 90: CAU 111, Facing East (06/22/2016)



Figure B-91
Photograph 91: CAU 111, Facing Southeast (06/22/2016)



Figure B-92
Photograph 92: CAU 111, Facing North (06/22/2016)

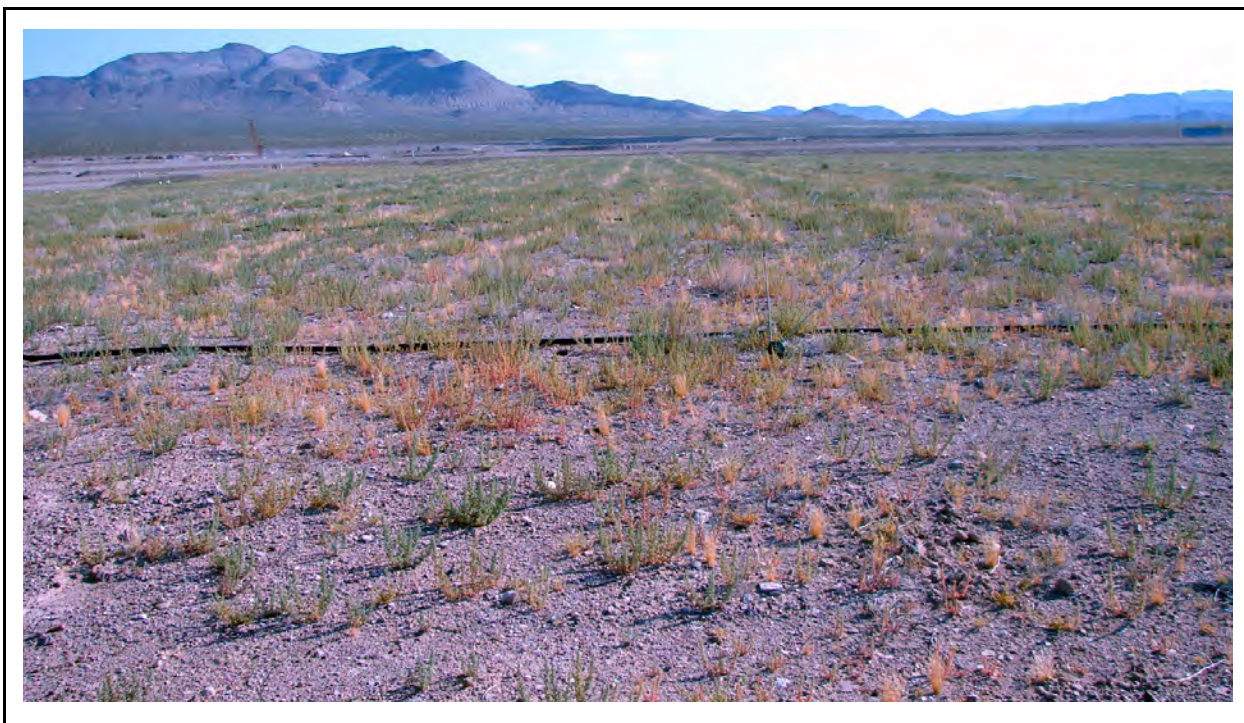


Figure B-93
Photograph 93: CAU 111, Facing Northeast (06/22/2016)

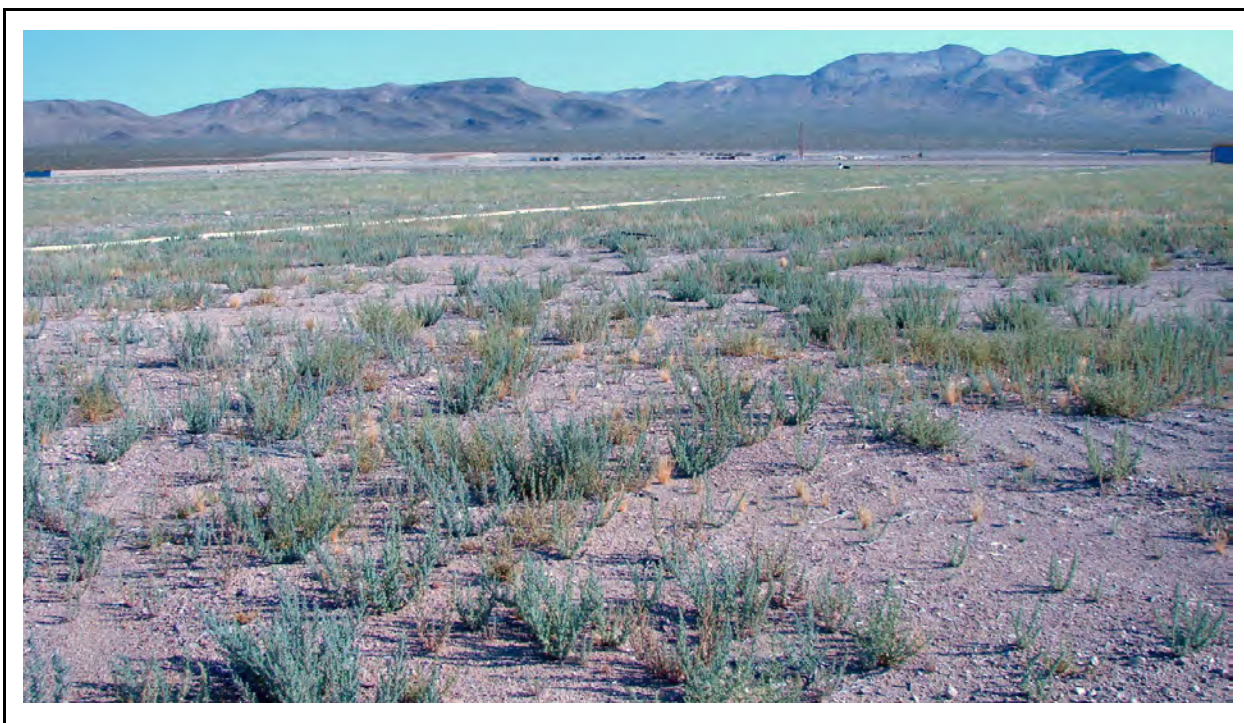


Figure B-94
Photograph 94: CAU 111, Facing Northwest (06/22/2016)



Figure B-95
Photograph 95: CAU 111, Arizona Crossing Facing West (06/22/2016)



Figure B-96
Photograph 96: CAU 111, Facing Northwest (09/19/2016)



Figure B-97
Photograph 97: CAU 111, Facing Southeast (09/19/2016)



Figure B-98
Photograph 98: CAU 111, Facing Southeast (09/19/2016)



Figure B-99
Photograph 99: CAU 111, Facing East (09/19/2016)



Figure B-100
Photograph 100: CAU 111, Facing Southeast (09/19/2016)



Figure B-101
Photograph 101: CAU 111, Facing North (09/19/2016)



Figure B-102
Photograph 102: CAU 111, Facing Northeast (09/19/2016)

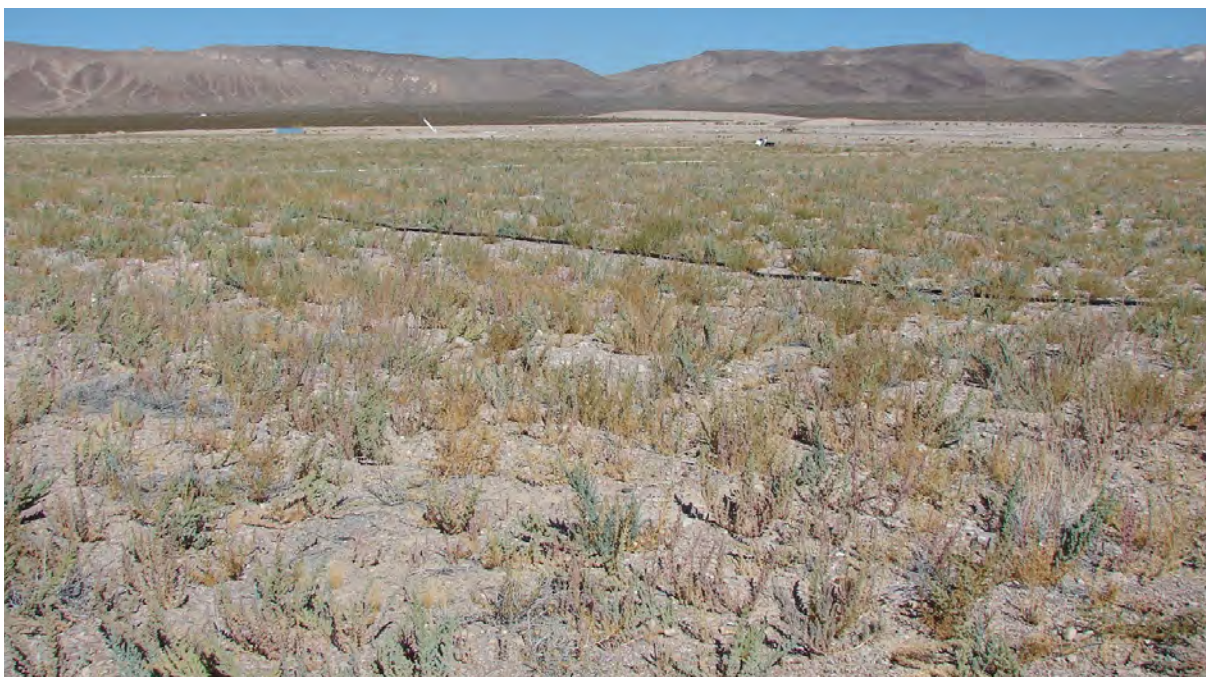


Figure B-103
Photograph 103: CAU 111, Facing Northwest (09/19/2016)



Figure B-104
Photograph 104: CAU 111, Arizona Crossing Facing West (09/19/2016)



Figure B-105
Photograph 105: CAU 111, Facing Northwest (12/06/2016)



Figure B-106
Photograph 106: CAU 111, Facing East (12/06/2016)



Figure B-107
Photograph 107: CAU 111, Facing Southeast (12/06/2016)



Figure B-108
Photograph 108: CAU 111, Facing East (12/06/2016)



Figure B-109
Photograph 109: CAU 111, Facing Southeast (12/06/2016)



Figure B-110
Photograph 110: CAU 111, Facing North (12/06/2016)

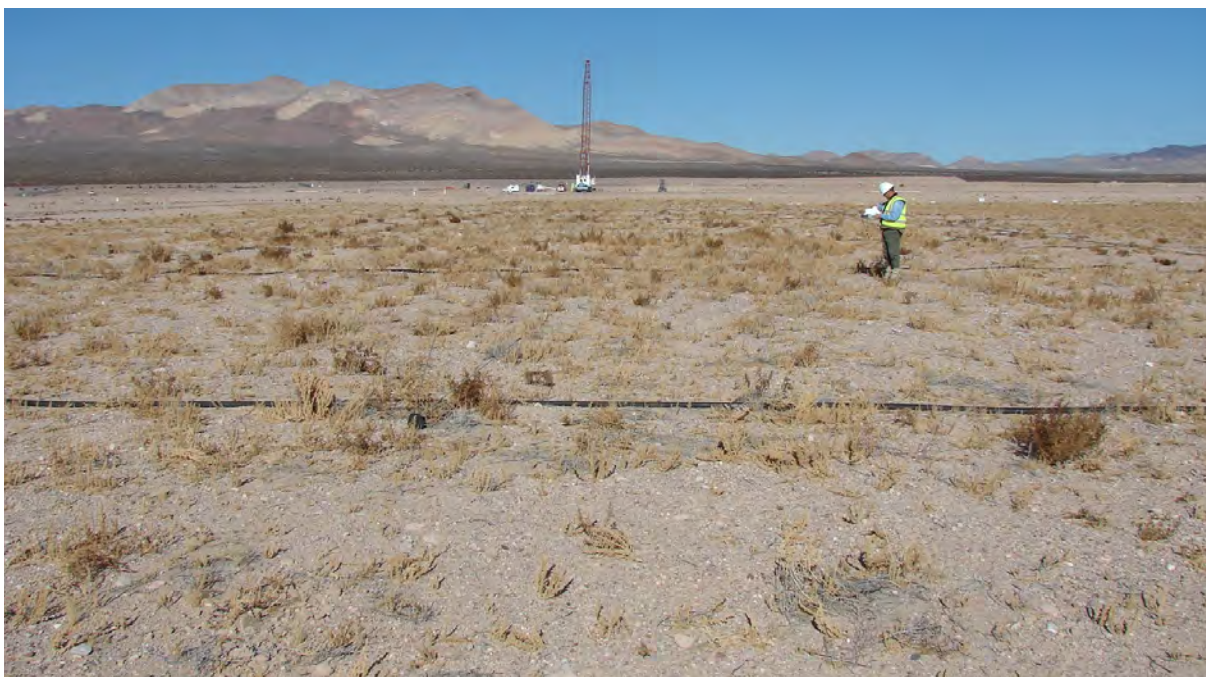


Figure B-111
Photograph 111: CAU 111, Facing North (12/06/2016)



Figure B-112
Photograph 112: CAU 111, Facing Northwest (12/06/2016)



Figure B-113
Photograph 113: CAU 111, Arizona Crossing Facing West (12/06/2016)



Figure B-114
Photograph 114: CAU 112, Facing Southwest (12/01/2015)



Figure B-115
Photograph 115: CAU 112, Facing Southwest (12/08/2016)

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