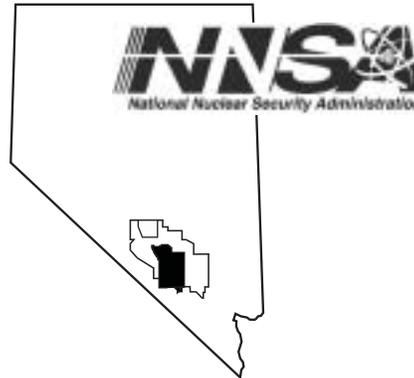


Nevada  
Environmental  
Restoration  
Project

DOE/NV--927



Post-Closure Inspection Report for  
Corrective Action Unit 90: Area 2  
Bitcutter Containment Annual  
Report, Nevada Test Site, Nevada

Controlled Copy No.: \_\_\_\_\_

Revision: 0

September 2003

Environmental Restoration  
Division

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

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**POST-CLOSURE INSPECTION REPORT FOR  
CORRECTIVE ACTION UNIT 90: AREA 2  
BITCUTTER CONTAINMENT ANNUAL  
REPORT, NEVADA TEST SITE, NEVADA**

**Prepared for  
U.S. Department of Energy  
National Nuclear Security Administration  
Nevada Site Office  
Work Performed Under Contract No.  
DE-AC08-96NV11718**

**Controlled Copy No.: \_\_\_\_\_**

**Revision: 0**

**September 2003**

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**POST-CLOSURE INSPECTION REPORT FOR  
CORRECTIVE ACTION UNIT 90: AREA 2  
BITCUTTER CONTAINMENT ANNUAL  
REPORT, NEVADA TEST SITE, NEVADA**

Approved by: SIGNATURE APPROVED  
Janet L. Appenzeller-Wing, Project Manager  
Industrial Sites Project

Date: 8/13/03

Approved by: SIGNATURE APPROVED  
Runore C. Wycoff, Division Director  
Environmental Restoration Division

Date: 8/13/03

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3.0 CONCLUSIONS AND RECOMMENDATIONS .....	1

## ATTACHMENTS

A. POST-CLOSURE INSPECTION CHECKLISTS

B. FIELD NOTES

C. INSPECTION PHOTOGRAPHS

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## **1.0 INTRODUCTION**

Area 2 Bitcutter and Post-Shot Containment Wells Corrective Action Unit (CAU) 90 Post-Closure Monitoring requirements are described in Section VII.B.8.b of the Nevada Test Site Resource Conservation and Recovery Act Permit for a Hazardous Waste Management Facility Number NEV HW009, Section VII, Revision 1, March 2003.

Post-closure care consists of the following:

- Semiannual inspections of the unit using an inspection checklist
- Photographic documentation
- Field note documentation
- Preparation and submittal of an annual report

The annual report consists of copies of the inspection checklist, repair records (if any), photographs, and recommendations and conclusions for the period December 2002 to June 2003. The Post-Closure Inspection Checklists are provided in Attachment A, a copy of the field notes is provided in Attachment B, and copies of the inspection photographs are provided in Attachment C.

## **2.0 RESULTS OF THE INSPECTIONS**

The first inspection at CAU 90 for the annual post-closure monitoring period was performed on December 19, 2002. Between July and December of 2002, small animal burrows were periodically backfilled. Two animal burrows were backfilled and vegetation was noted growing on the soil covers during the December inspection.

The second inspection at CAU 90 for the annual post-closure monitoring period was performed on June 26, 2003. Between January and June of 2003, several animal burrows were backfilled and vegetation was removed from the covers.

## **3.0 CONCLUSIONS AND RECOMMENDATIONS**

The overland runoff is being properly diverted around the site. No evidence of drainage or erosion is apparent through the site. Inspectors should continue to backfill small animal burrows and remove vegetation from the unit. No significant modifications or repairs are foreseeable in the near future.

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**ATTACHMENT A**

**POST-CLOSURE INSPECTION CHECKLISTS**

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**AREA 2, BITCUTTER & POSTSHOT INJECTION WELLS, POST-CLOSURE INSPECTION CHECKLIST**

Inspection Start Date and Time: 12/19/02 at 1510	Reason for Inspection: Semi-annual
Responsible Agency: Bechtel Nevada Remediation Projects	
Address: Nevada Test Site, Mercury, Nevada	
Responsible Agency Official: Jeff Smith, Project Manager	
Date of Last Post-Closure Inspection: 06/25/02	Reason for Last Post-Closure Inspection: Semi-annual
Chief Inspector: Jim Traynor	Associate Scientist Environmental Restoration
Name	Title Organization
Assistant Inspector:	
Name	Title Organization

**A. GENERAL INSTRUCTIONS**

- All checklist items must be completed and detailed comments made to document the results of the site inspection. The completed checklist is part of the field record of the inspection. Additional pages should be used as necessary to ensure that a complete record is made. Attach the additional pages and number all pages upon completion of the inspection.
- Any checklist line item marked by an inspector in a SHADED BOX, must be fully explained or an appropriate reference to previous reports provided. The purpose of this requirement is to provide a written explanation of inspector observations and the inspector's rationale for conclusions and recommendations. Explanations are to be placed on additional attachments and cross-referenced appropriately. Explanations, in addition to narrative, will take the form of sketches, measurements, annotated site maps.
- 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.
- A standard set of color 35mm photographs is required. In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. A photo log entry will be made for each photograph taken.
- This unit will be inspected biannually with formal reporting to the Nevada Division of Environmental Protection to be done annually. The annual report will include an executive summary, this inspection checklist with field notes and photo log attached, and recommendations and conclusions.

B. PREPARATION (To be completed prior to site visit)	YES	NO	EXPLANATION
1. Site as-built plans and site base map reviewed.	X		
2. Previous inspection reports reviewed.	X		
a. Were anomalies or trends detected on previous inspections?		X	
b. Was maintenance performed?		X	
3. Site maintenance and repair records reviewed.		X	No major repairs have been done
a. Has site repair resulted in a change from as-built conditions?			N/A
b. Are revised as-builts available that reflect repair changes?			N/A

**AREA 2, BITCUTTER & POSTSHOT INJECTION WELLS, POST-CLOSURE INSPECTION CHECKLIST**

C. SITE INSPECTION (To be completed during inspection)	YES	NO	EXPLANATION
<b>1. Adjacent off-site features within watershed areas.</b>			
a. Have there been any changes in use of adjacent area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b. Are there any new roads or trails?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c. Has there been a change in the position of nearby washes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d. Has there been lateral excursion or erosion/deposition of nearby washes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
e. Are there new drainage channels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
f. Change in surrounding vegetation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>2. Security fence, signs.</b>			
a. Displacement of fences, site markers, boundary markers, or monuments?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b. Have any signs been damaged or removed? (Number of signs replaced: _____)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All signs on both units have been reinforced.
c. Were gates locked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>3. Waste Unit covers.</b>			
a. Is there evidence of settling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b. Is there cracking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c. Is there evidence of erosion around the cap (wind or water)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d. Is there evidence of animal burrowing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
e. Have the site markers been disturbed by man or natural processes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
f. Do natural processes threaten to integrity of any cover or site marker?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
g. Other (including trash and debris in or around unit)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>4. Photo Documentation</b>			
a. Has a photo log been prepared?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b. Number of photos exposed ( 6 )			

**AREA 2, BITCUTTER & POSTSHOT INJECTION WELLS, POST-CLOSURE INSPECTION CHECKLIST**

**D. FIELD CONCLUSIONS**

	YES	NO	EXPLANATION
1. Is there an imminent hazard to the integrity of the unit? (Immediate report required)		X	
Person/Agency to whom report made:			
2. Are more frequent inspections required?		X	
3. Are existing maintenance/repair actions satisfactory?	X		
4. Is other maintenance/repair necessary?		X	

5. Field conclusions/recommendations: \_\_\_\_\_

All observations indicate continued integrity of the unit. Continue inspections as scheduled.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

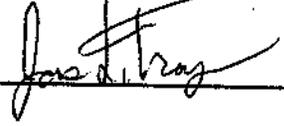
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**E. CERTIFICATION**

I have conducted an inspection of the Area 2 Bitcutter & Postshot Shop Containment Injection Wells, Corrective Action Unit 90, at the NTS in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photo logs, and photographs.

Chief Inspector's Signature: 	Printed Name: Jim Traynor
Title: Associate Scientist	Date: 12/19/02

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**AREA 2, BITCUTTER & POSTSHOT INJECTION WELLS, POST-CLOSURE INSPECTION CHECKLIST**

Inspection Start Date and Time: 06/26/03 at 09:00		Reason for Inspection: Semi-annual
Responsible Agency: Bechtel Nevada Remediation Projects		
Address: Nevada Test Site, Mercury, Nevada		
Responsible Agency Official: Jeff Smith Project Manager		
Date of Last Post-Closure Inspection: 12/19/02		Reason for Last Post-Closure Inspection: Semi-annual
Chief Inspector: Mike Floyd	Sr. Tech.	Environmental Restoration
Name	Title	Organization
Assistant Inspector:		
Name	Title	Organization

**A. GENERAL INSTRUCTIONS**

1. All checklist items must be completed and detailed comments made to document the results of the site inspection. The completed checklist is part of the field record of the inspection. Additional pages should be used as necessary to ensure that a complete record is made. Attach the additional pages and number all pages upon completion of the inspection.
3. Any checklist line item marked by an inspector in a SHADED BOX, must be fully explained or an appropriate reference to previous reports provided. The purpose of this requirement is to provide a written explanation of inspector observations and the inspector's rationale for conclusions and recommendations. Explanations are to be placed on additional attachments and cross-referenced appropriately. Explanations, in addition to narrative, will take the form of sketches, measurements, annotated site maps.
4. 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.
5. A standard set of color 35mm photographs is required. In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. A photo log entry will be made for each photograph taken.
6. This unit will be inspected biannually with formal reporting to the Nevada Division of Environmental Protection to be done annually. The annual report will include an executive summary, this inspection checklist with field notes and photo log attached, and recommendations and conclusions.

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

	YES	NO	EXPLANATION
1. Site as-built plans and site base map reviewed.	X		
2. Previous inspection reports reviewed.	X		
a. Were anomalies or trends detected on previous inspections?		X	
b. Was maintenance performed?		X	
3. Site maintenance and repair records reviewed.		X	No major repairs have been made
a. Has site repair resulted in a change from as-built conditions?			N/A
b. Are revised as-builts available that reflect repair changes?			N/A

AREA 2, BITCUTTER & POSTSHOT INJECTION WELLS, POST-CLOSURE INSPECTION CHECKLIST

C. SITE INSPECTION (To be completed during inspection)

YES

NO

EXPLANATION

1. Adjacent off-site features within watershed areas.

- a. Have there been any changes in use of adjacent area?
- b. Are there any new roads or trails?
- c. Has there been a change in the position of nearby washes?
- d. Has there been lateral excursion or erosion/deposition of nearby washes?
- e. Are there new drainage channels?
- f. Change in surrounding vegetation?

	x	
	x	
	x	
	x	
	x	
	x	

2. Security fence, signs.

- a. Displacement of fences, site markers, boundary markers, or monuments?
- b. Have any signs been damaged or removed?  
(Number of signs replaced: \_\_\_\_\_)
- c. Were gates locked?

	x	
	x	
x		

3. Waste Unit covers.

- a. Is there evidence of settling?
- b. Is there cracking?
- c. Is there evidence of erosion around the cap (wind or water)?
- d. Is there evidence of animal burrowing?
- e. Have the site markers been disturbed by man or natural processes?
- f. Do natural processes threaten to integrity of any cover or site marker?
- g. Other (including trash and debris in or around unit)?

	x	
	x	
	x	
	x	
	x	
	x	
	x	

4. Photo Documentation

- a. Has a photo log been prepared?
- b. Number of photos exposed ( \_\_\_\_\_ )

x		
---	--	--

AREA 2, BITCUTTER & POSTSHOT INJECTION WELLS, POST-CLOSURE INSPECTION CHECKLIST

D. FIELD CONCLUSIONS

1. Is there an imminent hazard to the integrity of the unit? (Immediate report required)

YES

NO

EXPLANATION

x

Person/Agency to whom report made:

2. Are more frequent inspections required?

x

3. Are existing maintenance/repair actions satisfactory?

x

4. Is other maintenance/repair necessary?

x

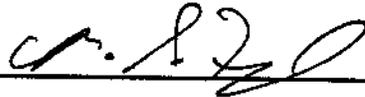
5. Field conclusions/recommendations:

All observations indicate continued integrity of the unit. Continue inspections as scheduled.

E. CERTIFICATION

I have conducted an inspection of the Area 2 Bitcutter & Postshot Shop Containment Injection Wells, Corrective Action Unit 90, at the NTS in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photo logs, and photographs.

Chief Inspector's Signature:



Printed Name:

Michael S. Floyd

Title: Sr. Tech

Date: 06/16/03

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## **ATTACHMENT B**

### **FIELD NOTES**

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TITLE

Bitcutter Quarterly Inspection  
(Dec. 2002)

PROJECT NO.

171

Work continued from Page \_\_\_\_\_

BOOK NO.

15<sup>th</sup> Arrived onsite. Weather: cold & windy.

Members:

Adjacent off site: Good.

Jim Traynor  
David Nacht

5 Fence & signs: Good. All signs on both units reinforced since September inspection.

Covers: Good.

- 10 Photos:
- 1 Looking N from E unit
  - 2 Looking N from W unit
  - 3 Looking S from W unit
  - 4 Looking W from E unit
  - 5 Looking E from W unit
  - 15 6 Looking S from E unit

Conclusions & recommendations:

Unit in good condition. Continue inspections as planned.

*[Handwritten signature]*

SCIENTIFIC BINDERY PRODUCTIONS CHICAGO 80603 Made in USA

SIGNATURE

Work continued to Page \_\_\_\_\_

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DATE

WITNESS

DATE

DATE

12/19/02

RCRA INSPECTIONS

Thursday June 26, 2003

AREA 2 BITCUTTER: NO ISSUES OR CONCERNS

5 AREA 3 W300'S CONSTRUCTION LANDFILL:  
NO ISSUES OR CONCERNS

AREA 3 AXEL'S ONE MINOR BREAK IN CHICKEN WIRE <sup>INNER</sup> FENCE  
100' (+/-) TO THE LEFT OF THE GATE AND ONE MINOR BREAK  
10 IMMEDIATELY TO THE LEFT OF THE GATE LEADING INTO THE CAP/COVER.  
NEARLY EAST CORNER SHOWING SIGNS OF SETTLING. THE TOTAL AREA  
IS APPROX 10' x 10' x 5". IN ADDITION TO THE SETTLING THERE  
IS NOW EVIDENCE OF CRACKING IN THIS AREA UP TO 1/8" DEEP.  
REPAIRS SHOULD BE MADE AS SOON AS PRACTICAL.

15 A6 DEBRIS POND'S VEGETATION WAS REMOVED FROM THE SURROUNDING  
AREA OF THE CAP/COVER BUT STILL SHOWS SIGNS OF VEGETATION  
ON THE CAP/COVER WITH THE APPROVAL OF THE STATE AND THE  
CL. RLT, RECOMMEND USING HERBICIDE TO CONTROL VEGETATION.

20 A23 HAS WARP TRENCHES & CAP/COVER DEVEGETATION WORK HAS NOT YET  
BEEN PERFORMED, RECOMMEND THIS WORK BE DONE AS SOON AS  
PRACTICAL.

25

SIGNATURE

DATE

6/26/03

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DATE

WITNESS

DATE

**ATTACHMENT C**

**INSPECTION PHOTOGRAPHS**

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## PHOTOGRAPH LOG

PHOTO NUMBER	DATE	DESCRIPTION
1a 1b	12/19/2002 6/26/2003	View looking north from east unit.
2a 2b	12/19/2002 6/26/2003	View looking north from west unit.
3a 3b	12/19/2002 6/26/2003	View looking south from west unit.
4a 4b	12/19/2002 6/26/2003	View looking west from east unit.
5a 5b	12/19/2002 6/26/2003	View looking east from west unit.
6a 6b	12/19/2002 6/26/2003	View looking south from east unit.

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1a



1b



2a



2b



3a



3b



4a



4b



5a



5b



6a



6b

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