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August 29, 2012

Ref.: 2010-084

Mr. Pete Jones
On-Scene Coordinator
USDA Forest Service, Region 6
645 Washington Street
Ashland, Oregon 97520

Technical Memorandum
July 2012 Site Inspection Report
Blue Ledge Mine
Rogue River-Siskiyou National Forest

Dear Mr. Jones:

Engineering/Remediation Resources Group, Inc. (ERRG) is submitting this technical memorandum summarizing the site inspection performed on July 2, 2012, and any maintenance activities conducted since the last inspection on June 1, 2012, at the Blue Ledge Mine site. ERRG performed the site inspection in accordance with the operations, maintenance, and monitoring (OM&M) requirements for the Blue Ledge Mine site under U.S. Department of Agriculture Forest Service (Forest Service) Contract No. GS-10F-0294R, Delivery Order No. AG-0489-D-10-0126. For a full list of elements inspected, please see the attached site inspection checklist ([Enclosure 1](#)), overall site map ([Enclosure 2](#)), photographic log ([Enclosure 3](#)), and maintenance checklist ([Enclosure 4](#)).

Background

In 2010, ERRG was contracted to perform a removal action to remove waste rock from four waste rock piles (WRPs) near the mine adits. The waste rock was relocated to a newly constructed on-site repository. The repository was capped after the waste rock had been removed from the WRPs. Disturbed soil areas within the reclamation areas were revegetated with native species. Nine pH treatment and sediment basins were constructed below the WRPs to capture sediment and to treat mine drainage prior to discharge into Joe Creek. ERRG was contracted to perform OM&M of the repository cap and structures constructed to control erosion and treat mine drainage, as outlined in the Removal Action Work Plan (RAWP)¹. The RAWP specifies that site inspections will be performed after rain events generating greater than 0.5 inches of precipitation, as recorded by nearby representative weather stations, and on a monthly basis when the site is accessible, which is generally between April through October.

During each site inspection, ERRG reviews the following elements:

- Integrity of the reclamation areas
- Areas where erosion or deterioration has occurred since the last site visit

¹ ERRG, 2010. "Removal Action Work Plan, Non-Time-Critical Removal Action for Former Blue Ledge Mine Site, Siskiyou County, California."

- Condition of the erosion control and sediment control measures
- Integrity of constructed site elements (documented via photographs)
- Condition of reclamation plantings
- Needed maintenance and repairs

Summary of Site Inspection

ERRG inspected all reclamation areas during this July 2012 site inspection. The reclamation areas were observed to be intact and in good functioning condition. Generally, the best management practices (BMPs) to control erosion were in good condition. No additional erosion had occurred since the June 2012 inspection in all reclamation areas.

The repository had no additional or excessive erosion and does not require additional erosion control measures. No additional erosion was observed on the incoming Forest Road 1060 and haul roads. Overall, the roads were in very good shape, except for small areas noted during previous inspections that require maintenance. Road maintenance is scheduled to be performed in August 2012. The stockpile areas and WRPs 1, 2, 3, and 4 were observed to have no new erosion. All sediment basins had the same amount of sediment reported during previous inspections.

The pH of water in the basins remains low (similar to the pH values for June 2012) due to mine drainage and a seasonally declining flow of surface water. The following table shows the pH for water in all sediment treatment basins. No water was flowing from WRP-2 through basins 2A and 2B, thus no samples were collected during this site inspection.

Table 1. pH of Sediment Treatment Basins

WRP-1		WRP-2		WRP-3	
1A	5.0	2A-below	NS	3A-below ¹	5.5
1B	5.0	2A-above	NS	3B-above ²	6.5
1C	5.0	2B-below	NS		
1D	5.0	2B-above	NS		
1E	5.0				
1F-below ¹	5.0				
1F-above ²	5.0				

Notes:

NS = no sample was collected because water was not present in the treatment basin.

The pH of the water in basins 1A through 1F did not change significantly since the June 2012 inspection report. The pH is still above the pH reading of 3.74 measured during fall 2011 in the main drainage². Limestone fouling will be evaluated during clean out of the accumulated sediment in August 2012.

² ERRG, 2012. Section 6, Removal Action Monitoring Activities, in "Remedial Action Completion Report, Non-Time-Critical Removal Action for Blue Ledge Mine Site, Siskiyou County, California." February.

Reclamation plants were inspected in all areas. The total number of dead plants is estimated during each site inspection. The final determination of plant survival will not be made until late September 2012. Table 2 summarizes the estimate of dead plants in relation to the total plants planted.

Table 2. Reclamation Planting Mortality Assessment

Location	Dead Plants ¹	Total Number of Trees and Shrubs Planted
Repository	3,000	4,992
North Storage Area	100	1,366
South Storage Area	30	157
Rock Stockpile Area	5	237
WRP-1	5	184
WRP-2	5	24
WRP-3	300	1,067
WRP-4	50	768

Notes:

1 = The estimate of plant numbers is approximate

A large percentage of shrubs on the repository have died since the June 2012 inspection. At the date of the July inspection, approximately 90 percent of plantings on the top of the repository and 60 percent of the plantings on the side slope of the repository have died. Soil conditions under the bark mulch were drier, but the soil was still moist. As noted in the June 2012 Inspection Report, saturated conditions on the top layer of soil are likely causing the high mortality rates of plants on the repository. A site visit is scheduled for July 17, 2012, to evaluate the condition of soil on the repository to propose alternate plans for planting on the repository. Results of the July 17 site visit will be summarized in the August 2012 Site Inspection Report. In June 2012, additional grass seed was broadcast ([Enclosure 4](#)) on the bare areas that existed primarily on the top of the repository ([Enclosure 2](#)). Areas on the repository where the grass seed was broadcast have shown an increased growth.

As observed during the May 2012 inspection, a significant number of plants (up to 30 percent) have died on WRP-3; the plants were primarily Douglas Fir. During the July 2012 site inspection, no additional plants had died during the period between the June and July inspections. WRP-3 will also be inspected during a site inspection on July 17, 2012, as noted above. Grass was broadcasted at WRP-3 in June and has not yet germinated.

All other areas have low plant mortality, and no maintenance is required. No evidence of animal browsing was observed in any of the planted areas. Most surviving trees and shrubs appeared to be healthy. ERRG also performed routine maintenance during June ([Enclosure 4](#)). The repository sump water level rose 1 inch to 267 inches in July from the June 2012 reading of 268 inches. The bottom of the sump is 326 inches. The total water depth is 58 inches. The sump is 200 gallons and 60 inches deep. Therefore there is approximately 200 gallons of water. This reading is the same as the May 2012 reading. The similar readings appear to be caused by the equilibrium level of the remaining water in the repository. The repository leachate sump water will be removed during the summer maintenance activities and disposed of at an approved facility. Road maintenance, which will require the use of heavy equipment, will be performed in August 2012, in conjunction with removal of sediment from the treatment basins.

Site access gates and locks are in good condition, and no evidence of unauthorized access was observed during this site inspection. For a full list of elements inspected, please see the attached site inspection checklist ([Enclosure 1](#)), and photographic log ([Enclosure 3](#)).

If you have any questions or need additional information, please do not hesitate to contact Tim McCormack at (206) 512-3169, or Brian Wetzsteon at (503) 701-7943.

Sincerely,



Timothy S. McCormack, LG
Regional Technical Manager



Brian Wetzsteon
Northwest Construction Manager

MH/kj

Encl.: [Enclosure 1](#) – July 2012 Blue Ledge Mine Inspection Checklist
[Enclosure 2](#) – Overall Site Map
[Enclosure 3](#) – July 2012 Inspection Photographic Log
[Enclosure 4](#) – Maintenance Task List

cc: ERRG Project File

**Enclosure 1. July 2012 Blue Ledge Mine
Inspection Checklist**

**BLUE LEDGE MINE
INSPECTION CHECKLIST**

MONTHLY INSPECTION
Month: July, Year: 2012

BLUE LEDGE MINE MONTHLY INSPECTION CHECKLIST

Month: July Year: 2012

**Blue Ledge Mine Removal Project
Siskiyou County, California
Operation, Maintenance, and Monitoring Period**

NOTE: All photographs associated with this checklist were taken on July 2, 2012; Refer to Enclosures 2, 3, and 4 in the inspection letter.

Repository

1. Inspect the silt fence, wattles, and other BMPs at the Repository and Repository Stockpile Area (see Enclosure 2). Do BMPs require repair or replacement? Yes* No

**If yes, repair or replace damaged components and make recommendations to reduce future damage. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: _____

2. Inspect repository cover soil. Is there evidence of excessive or preferential erosion (see Enclosure 2)? Yes* No

**If yes, notify project manager and place temporary BMPs to minimize further erosion until a solution can be found. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: No new erosion or any excessive erosion has occurred since the last inspection.

3. Inspect the repository access road (see Enclosure 2). Are there any areas of excessive erosion or other areas where the road requires repair? Yes* No

**If yes, notify project manager of potential need for repair.*

Comments: No additional or excessive erosion has occurred. Any evidence of erosion has occurred will be repaired during the summer work sessions or prior to next rain whichever comes first.

4. Inspect repository leachate sump tank and cap (see Enclosure 2). Is the sump and cap in good condition and locked? Is liquid present in the sump? Yes No*

**If no, take several pictures of damage and make repairs to fix or secure prior to leaving site (if possible). If liquid is in the sump, measure the depth (requires a minimum 30-foot tape measure). Collection of a liquid sample may be required for profiling and disposal.*

Comments: Water depth was 58 inches, with top level of liquid at 267 inches from lip.

5. Inspect anchor trench drainage pipes and the repository underdrain where they daylight (see Enclosure 2). Is the screening damaged or is there evidence of the pipes being blocked? Yes* No

**If yes, unblock pipe and/or repair screen.*

Comments: All drains were clear, no damage occurred to any screen, and no blockage of any drains.

6. Inspect the repository stormwater drain ditch (see Enclosure 2). Is the stormwater drain ditch damaged or is there evidence of any portion of the stormwater drain ditch being blocked? Yes* No

**If yes, unblock ditch.*

Comments: _____

7. Inspect plants in the repository and repository stockpile area (see Enclosure 2). Is there evidence that animals have browsed on the plants? Yes* No

**If yes, reapply Big Game Repellant to prevent further browsing. A listing of grass seeds, fertilizers, animal repellants, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: No new evidence of browsing after application of Big Game Repellant on May 5, 2012.

8. Have plants died in the Repository and Repository Stockpile Areas (see Enclosure 2)? Yes* No

**If yes, estimate number of plants and record it in the comments. The total number of plants installed at the repository and repository stockpile areas are shown in enclosure : Site Map.*

Comments: Approximately 90% of plants on top of the repository and 60% of plants on the slope of the repository out of the 4,992 plants have died.

9. Inspect Flexterra and grass seeded areas on the repository (see Enclosure 2). Are any repairs needed or invasive species present? Yes* No

**If yes, identify areas for repair or pull weeds and dispose of properly.*

Comments: No invasive species were present. Seeded areas have filled in with grass.

North Storage Area

1. Inspect road leading to the Repository and North Storage Area (see Enclosure 2). Is there evidence of excessive erosion? Are the water bars damaged? Yes* No

**If yes, apply temporary BMPs and make recommendations for repair. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: No excessive or additional erosion has occurred in the North Storage Area. Some rills in the access road will be repaired during the summer maintenance activities. The water bars are not damaged.

2. Inspect the silt fence, wattles, and other BMPs at the North Storage Area (see Enclosure 2). Do BMPs require repair or replacement? Yes* No

**If yes, repair or replace damaged components and make recommendations to reduce future damage. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: _____

3. Inspect Flexterra and grass seeded areas on the North Storage Area (see Enclosure 2). Are any repairs needed or any invasive species present? Yes* No

**If yes, identify areas for repair or pull weeds and dispose of properly.*

Comments: _____

4. Inspect plants in the North Storage Area (see Enclosure 2). Have animals browsed on the plants? Yes* No

**If yes, reapply Big Game Repellant to prevent further browsing. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: No new evidence of browsing after application of Big Game Repellant on May 5, 2012.

5. Have any plants died in the North Storage Area (see Enclosure 2)? Yes* No

**If yes, estimate number of plants and record it in the comments. The total number of plants installed at the North Storage Area is shown on Enclosure 2.*

Comments: Approximately 100 out of 1,366 plants have died.

South Storage Area

1. Inspect the silt fence, wattles, and other BMPs at the South Storage Area (see Enclosure 2). Do BMPs require repair or replacement? Yes* No

**If yes, repair or replace damaged components and make recommendations to reduce future damage. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: No repairs required.

2. Inspect plants in the South Storage Area. Have animals browsed on plants? Yes* No

**If yes, reapply Big Game Repellent to prevent further browsing. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: No new evidence of browsing after application of Big Game Repellant on May 5, 2012

3. Have any plants died in the South Storage Area (see Figure P-5)? Yes* No

**If yes, estimate number of plants and record it in the comments. The total number of plants installed at the South Storage Area is shown on Figure P-5.*

Comments: _____

4. Inspect Flexterra and grass seeded areas along Joe Creek (see Figure P-5). Are any repairs needed or any invasive species present? Yes* No

**If yes, identify areas for repair or pull weeds and dispose of properly.*

Comments: _____

Rock Stockpile Area

1. Inspect the silt fence, wattles, and other BMPs at the Rock Stockpile Area (see Figure P-6). Do BMPs require repair or replacement? Yes* No

**If yes, repair or replace damaged components and make recommendations to reduce future damage. A listing of approved BMPs for implementation is shown in Appendix H of the SWPPP.*

Comments: No BMP maintenance required after adding slash to slope.

2. Inspect plants in the Rock Stockpile Area (see Figure P-6). Have animals browsed on the plants? Yes* No

**If yes, reapply Big Game Repellent to prevent further browsing. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: No browsing evident after application of Big Game Repellant on May 5, 2012.

3. Have any plants died in the Rock Stockpile Area (see Figure P-6)? Yes* No

**If yes, estimate number of plants and record it in the comments. The total number of plants installed at the south storage area is shown on Figure P-6.*

Comments: An estimated 5 out of 237 plants have died.

4. Inspect Flexterra and grass seeded areas (see Figure P-6). Are any repairs needed or any invasive species present? Yes* No

**If yes, identify areas for repair or pull weeds and dispose of properly.*

Comments: _____

Forest Service Roads and Haul Roads

1. Are there areas of Forest Service Road 1060 that have experienced excessive erosion? Yes* No

**If yes, document road condition with photographs and install temporary BMPs to help minimize further erosion. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: Excessive erosion has not occurred. Several rills have developed over the winter that will require repair during the summer maintenance period. The rill by the large water bar is the largest rill.

2. Are culverts along Forest Service Road 1060 marked and draining properly? Yes No*

**If no, perform necessary maintenance or repair to culvert to return to good working condition.*

Comments: The culverts have been cleared adequately for drainage on the date of the inspection.

3. Inspect haul roads 1, 2, 3, and 4; the miner's trail parking area; and the decommissioned haul roads 2 and 4 (see Enclosure 2). Are there areas of excessive erosion? Are water bars damaged?
Yes* No

**If yes, place temporary BMPs and repair damaged water bars. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: Several areas of erosion were visible on the side bank of Haul Road 4 (see photographic log). These areas will require additional berms, water bars, and maintenance on the side bank to reduce further erosion to be implemented during the August 2012 maintenance event.

4. Inspect BMPs along Haul Roads 1, 2, 3, and 4; the miner's trail parking area; and the decommissioned Haul Roads 2 and 4 (see Enclosure 2). Are BMPs in good condition? Yes No*

**If no, repair and/or replace BMPs as necessary. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: Repairs were made to silt fences (up-righting & re-staking as necessary). No additional repairs are required.

5. Inspect areas of Haul Roads 1, 2, 3, and 4; the miner's trail parking area; and the decommissioned Haul Roads 2 and 4 (see Enclosure 2). Record grass growth progress. Are there bare areas that require reseeding? Yes* No

**If yes, reseed bare areas. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: _____

Waste Rock Pile 1

1. Inspect log wattles, straw wattles, and other BMPs at the reclamation areas on WRP-1 (See Enclosure 2). Are all BMPs in good condition? Yes No*

**If no, repair and/or replace BMPs as necessary. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: No repairs are needed.

2. Inspect Flexterra and grass seeded areas at the reclamation areas on WRP-1 (see Enclosure 2). Are any repairs needed or any invasive species present? Yes* No

**If yes, identify areas for repair or pull weeds and dispose of properly.*

Comments: _____

3. Inspect plants at the reclamation areas on WRP-1 (see Enclosure 2). Have animals browsed on the plants? Yes* No

**If yes, reapply Big Game Repellent to prevent further browsing. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: No new evidence of browsing after application of Big Game Repellant on May 5, 2012.

4. Have any plants at the reclamation areas died on WRP-1 (see Enclosure 2)? Yes* No

**If yes, estimate number of plants and record it in the comments. The total number of plants installed at WRP-1 is shown on Enclosure 2.*

Comments: An approximate 5 out of 241 plants have died.

5. Are there areas of excessive erosion on WRP-1 (see Enclosure 2)? Yes* No

**If yes, apply temporary BMPs. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: A small landslide has deposited sediment into sediment treatment basin 1F. No additional or excessive erosion requiring additional BMPs has occurred on WRP-1.

6. Inspect each sediment treatment basin at WRP-1 (see Enclosure 2). For each basin, record the volume of sediment accumulated (as a percentage of capacity), the amount of fouled limestone (in inches), and the pH of water as listed below (if any). Record and photograph any excessive erosion in or around the sediment basin.

Sediment Treatment Basin 1A (closest to the Joe Creek):

Accumulated sediment: 30%

Fouled limestone: N/A

pH below basin 1A: 5.0

Water depth: 8 inches deep

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1B:

Accumulated sediment: 15%

Fouled limestone: N/A

pH below basin 1B: 5.0

Water depth: 3 inches deep; flow is no longer running around the liner

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1C:

Accumulated sediment: 50%

Fouled limestone: N/A

pH below basin 1C: 5.0

Water depth: 3 inches deep

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1D:

Accumulated sediment: 35%

Fouled limestone: N/A

pH below basin 1D: 5.0

Water depth: 6 inches deep

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1E:

Accumulated sediment: 90%

Fouled limestone: N/A

pH below basin 1E: 5.0

Water depth: 3 inches deep

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1F:

Accumulated sediment: 100% due to landslide and sediment

Fouled limestone: N/A

pH below basin 1F: 5.0

pH above basin 1F: 5.0

Water depth: 1 inch deep.

Excessive erosion around the basin? Yes* No

Waste Rock Pile 2

1. Inspect wattles, silt fence, and other BMPs at the reclamation areas on WRP-2 (see Enclosure 2). Are all BMPs in good condition? Yes No*

**If no, repair and/or replace BMPs as necessary. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: _____

2. Inspect plants at the reclamation areas on WRP-2 (see Enclosure 2). Have animals browsed on the plants? Yes* No

**If yes, reapply Big Game Repellent to prevent further browsing. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: _____

3. Have any plants at the reclamation areas died on WRP-2 (see Enclosure 2)? Yes* No

**If yes, estimate number of plants and record it in the comments. The total number of plants installed at WRP-2 is shown on Enclosure 2.*

Comments: An estimated 5 out of 24 plants have died.

4. Are there areas of excessive erosion on WRP-2? Yes* No

**If yes, apply temporary BMPs. A listing of grass seeds, fertilizers, animal repellants, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: No additional or excessive erosion has occurred since the last inspection.

5. Inspect each sediment treatment basin at WRP-2 (see Enclosure 2). For each basin, record the volume of sediment accumulated (as a percentage of capacity), the amount of fouled limestone (in inches), and the pH of the water as listed below (if any). Record and photograph any excessive erosion in or around the sediment basin.

Sediment Treatment Basin 2A:

Accumulated sediment: 50% – half full of slide debris

Fouled limestone: N/A

pH below basin 2A: Not sampled

pH above basin 2A: Not sampled

Water depth: No water in basin to sample

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 2B:

Accumulated sediment: 50% – half full of slide debris

Fouled limestone: N/A

pH below basin 2B: Not sampled

pH above basin 2B: Not sampled

Water depth: No water in basin to sample

Excessive erosion around the basin? Yes* No

Waste Rock Pile 3

1. Inspect log wattles, straw wattles, and other BMPs at the reclamation areas on WRP-3 (see Enclosure 2). Are all BMPs in good condition? Yes No*

**If no, repair and/or replace BMPs as necessary. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: Some wattles require repair and some areas under the log wattles need to be filled in. This work will be conducted during the Summer maintenance event.

2. Inspect plants at the reclamation areas on WRP-3 (see Enclosure 2). Have animals browsed on the plants? Yes* No

**If yes, reapply Big Game Repellent to prevent further browsing. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: No evidence of browsing on plants was observed.

3. Have any plants at the reclamation areas died on WRP-3 (see Enclosure 2)? Yes* No

**If yes, estimate number of plants and record it in the comments. The total number of plants installed at WRP-3 is shown on Enclosure 2.*

Comments: An estimated 300 plants out of 1,067 plants have died.

4. Are there areas of excessive erosion on WRP-3? Yes* No

**If yes, apply temporary BMPs. A listing of grass seeds, fertilizers, animal repellants, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: No new erosion or excessive erosion was observed.

5. Inspect each sediment treatment basin at WRP-3 (see Enclosure 2). For each basin, record the volume of sediment accumulated (as a percentage of capacity), the amount of fouled limestone (in inches), and the pH of the water as listed below (if any). Record and photograph any excessive erosion in or around the sediment basin.

Sediment Treatment Basin 3:

Accumulated sediment: <25%

Fouled limestone: N/A

pH below basin 3: 5.5

pH above basin 3: 6.5

Water depth: 1 inch deep

Excessive erosion around the basin? Yes* No

Waste Rock Pile 4

1. Inspect log wattles, straw wattles, and other BMPs at the reclamation areas on WRP-4 (see Enclosure 2). Are all BMPs in good condition? Yes No*

**If no, repair and/or replace BMPs as necessary. A listing of approved BMPs for implementation is shown in Appendix G of the SWPPP.*

Comments: Wattles restaked.

2. Inspect plants at the reclamation areas on WRP-4 (see Enclosure 2). Have animals browsed on the plants? Yes* No

**If yes, reapply Big Game Repellent to prevent further browsing. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: No browsing has occurred since application of Big Game Repellant on May 5, 2012.

3. Have any plants at the reclamation areas died on WRP-4 (see Enclosure 2)? Yes* No

**If yes, estimate number of plants and record it in the comments. The total number of plants installed at WRP-4 is shown on Enclosure 2.*

Comments: Approximately 50 out of 768 plants have died.

4. Are there areas of excessive erosion on WRP-4? Yes* No

**If yes, apply temporary BMPs. A listing of grass seeds, fertilizers, animal repellents, and other reclamation products is shown in Appendix G of the SWPPP.*

Comments: _____

5. Inspect the reinforced slope stability fabric area at WRP-4 (see Enclosure 2). Is the fabric in good condition? Yes No*

**If no, perform maintenance or repair.*

Comments: _____

Additional Notes (Time, temperature, wind direction, evidence of unauthorized access, condition of green gate, locks, and other observations)

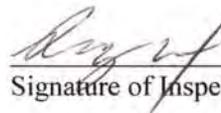
The weather was clear and sunny. The temperature was approximate 65°F, with light winds from the NE. The gates were in good condition with no unauthorized access noted. The site is generally in very good condition. Grass on WRP-3 has not germinated after hand broadcasting in June 2012.

Randy West

Name of Inspector(s)

Engineering/Remediation Resources Group, Inc. (ERRG)

Company



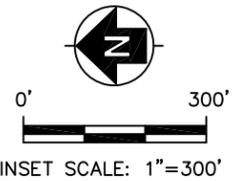
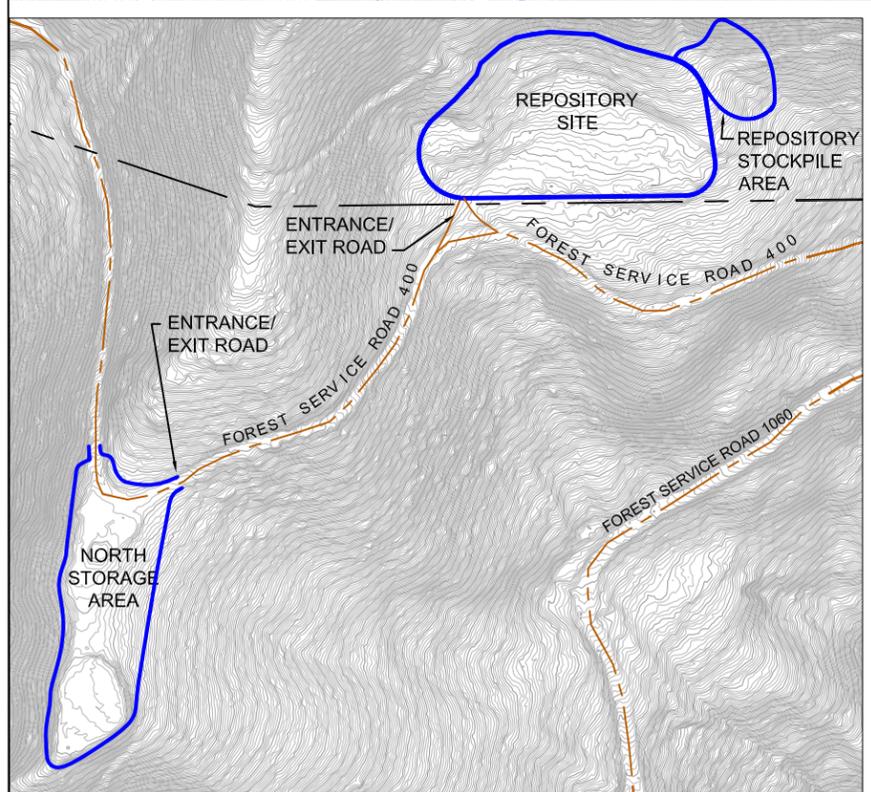
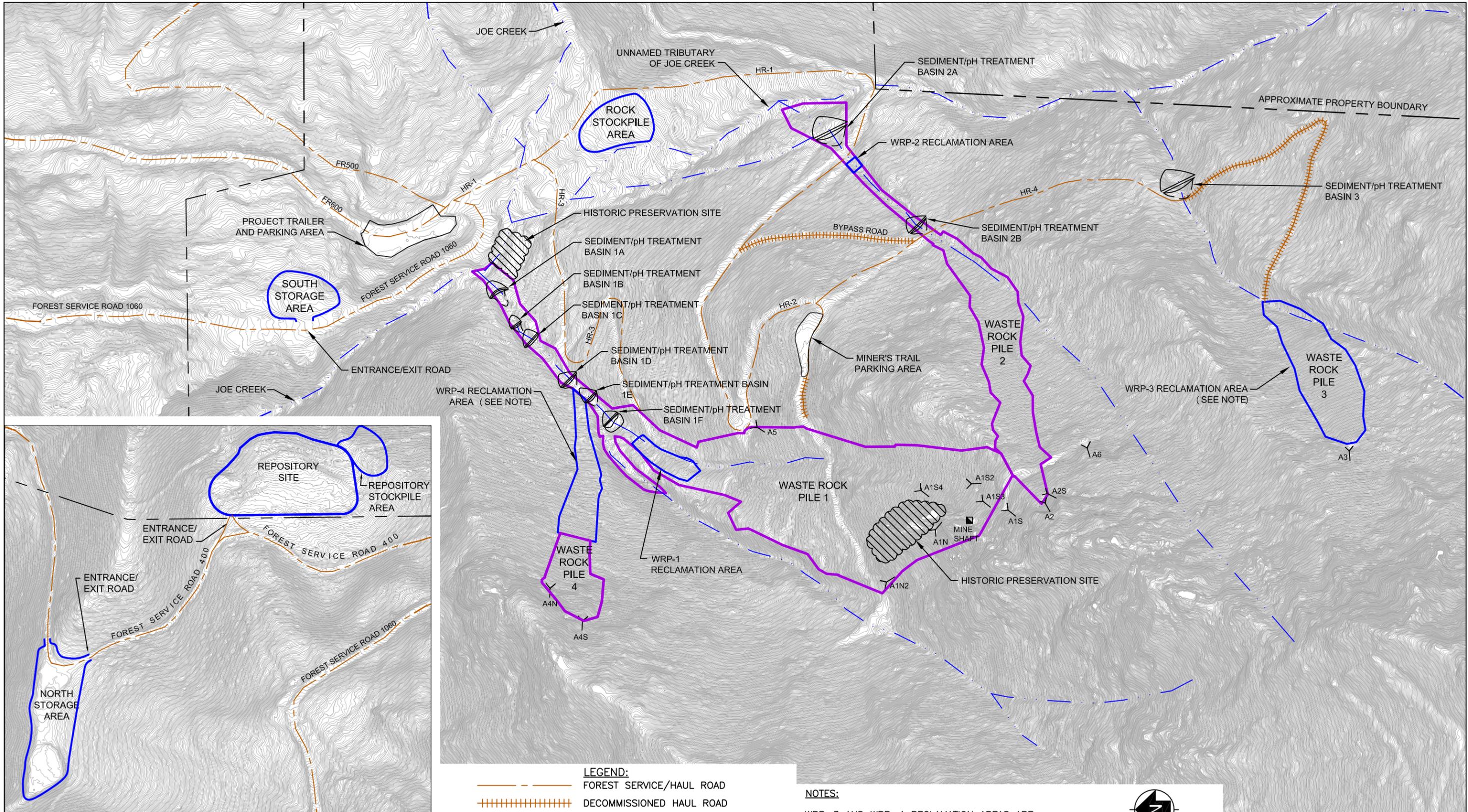
Signature of Inspector

7-2-2012

Date of Inspection

Enclosure 2. Overall Site Plan

FILE NAME: N:\Graphics\2010\2010-084 USFS Blueledge Mine\N_Maps and Drawings\Final Report\Overall Site Plan 2.dwg LAYOUT NAME: 2 PLOTTED: Tuesday, May 29, 2012 - 11:08am



- LEGEND:**
- FOREST SERVICE/HAUL ROAD
 - DECOMMISSIONED HAUL ROAD
 - PROPERTY BOUNDARY
 - RECLAMATION AREA
 - STREAM
 - WASTE ROCK BOUNDARY REMOVAL LIMIT
 - APPROXIMATE LOCATION OF ADIT
 - APPROXIMATE LOCATION OF MINE SHAFT

NOTES:
 WRP-3 AND WRP-4 RECLAMATION AREAS ARE ALSO THE WASTE ROCK BOUNDARY REMOVAL LIMITS.
 FR = FOREST SERVICE ROAD
 HR = HAUL ROAD

SOURCE: URS BLUE LEDGE MINE REMOVAL ACTION, DRAWING NO. 101, SHEET 7 OF 60, CAD FILE NO. 101, DATED: 2/2010.

Engineering/Remediation Resources Group, Inc. 4585 Pacheco Blvd, Suite 200 Martinez, California 94553 (925) 969-0750	CLIENT: USDA FOREST SERVICE	OVERALL SITE PLAN		
	LOCATION: BLUE LEDGE MINE REMOVAL ACTION	DRAWN BY: RDB 11/18/11	CHECKED BY: JGS 11/21/11	PROJECT NO. 2010-084

Enclosure 3. July 2012 Inspection Photographic Log



Photograph 1: Top of Repository looking south
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 2: Top of Repository, mulched planting area (note no growing shrubs)

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 3: Repository Stockpile looking south. Area typically shaded.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 4: Repository stormwater drainage ditch.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 5: Repository slope below access road. Anchor Trench Drain located at Orange Flag

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 6: Anchor trench drain outlet uncovered during May maintenance.

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 7: Repository Access Road
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 8: North Storage Area looking north.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 9: Rock Stockpile Area.

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 10: Sediment/pH Treatment Basin 1A

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 11: Sediment/pH Treatment Basin 1B.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 12: Sediment/pH Treatment Basin 1C.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 13: Sediment/pH Treatment Basin 1D.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 14: Sediment/pH Treatment Basin 1E.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 15: Sediment/pH Treatment Basin 1F.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 16: WRP-1 reclamation area.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 17: Sediment/pH Treatment Basin 2B.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 18: WRP-2 reclamation area.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 19: WRP-2.

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 20: WRP-3.

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 21: Sediment/pH Treatment Basin 3.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 22: WRP-4.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 22: South Storage Area.

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012



Photograph 22: Erosion on the side of Haul Road 4 requiring repair.

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Randall West (ERRG)

Date: July 2, 2012

Enclosure 4. Maintenance Task List

Maintenance Task List

<i>Task (by area)</i>	<i>Maintenance Date</i>	<i>Notes</i>	<i>Picture (y/n)</i>	<i>Intials</i>
Roads				
1060 Road - remove soil and debris from ditch where water crosses road in about 5 places from the green gate to the repository.	5/5/12	there were three spots I was able to fix	Y	RW
Clean culvert inlet at south stockpile and at HR1 entry near trailer area.	5/5/12		Y	RW
Move rocks to allow ponded water at HR1 entry to run into culvert inlet.	5/5/12		Y	RW
Fill in rill at big rolling water bar.	5/5/12		Y	RW
Clean culvert inlet at south stockpile and at HR1 entry near trailer area.	5/6/12		Y	RW
Move rocks to allow ponded water at HR1 entry to run into culvert inlet.	5/6/12		Y	RW
Repository				
Expose toe drain outlets. Fix damaged screen.	5/5/12		Y	RW
Clean up liner scrap and other geotextile trash.	5/5/12		N	RW
Regrade rills in bark below repository road. Lop branches to lay flat on/in bark.				

Put grass seed + fertilizer on the bare slopes below the sump.	5/6/12		n	Rw
Try putting more grass seed and fertilizer on the thin grass spots to see if that helps. Priority is the slope.	6/2/12		n	Rw

North Stockpile				
Put slash on rills in the slope west of the rock stockpile. Use existing slash and cut it to lay flat or embed into dirt.	5/11/12		y	Rw
South Stockpile				
Add more straw, slash, regrade bark to cover rills and iron staining.	5/11/12		y	Rw
Re-direct water into drain pipe to stop rills from growing and heal.	5/11/12		n	Rw
Cleanout sediment behind log and silt fence at entrance.				
Cleanout culvert inlet and fix sediment wattles.	5/11/12		y	Rw
Trailer area				
Place geotextile and rip rap over erosion on bank at haul road entrance.				
Repair silt fence at creek crossings	6/1/12		y	Rw

Sediment Basins #1A-F				
Restore liner dam to raise water elevation at basins 1B and 1C. Water currently leaks around the edge or seam of liner.				
Clean out sediments and debris.				
WRP#4				
Repair any straw wattles that have come loose.	6/8/12		Y	Rw
Haul Roads				
Culvert inlet and outlet cleanout on HR1 just below #2 creek crossing.	6/2/12		Y	Rw
Repair silt fence at creek crossings	6/2/12		Y	Rw
Spread out dirt sluff at bypass road intersection and put grass seed on it.			Y	Rw
Fix water bars that have sediment or have been overtopped and created rills. Fix rocks at outlets. Clean out sediment as needed to maintain function.	6/2/12			
Install new water bar near toe of slope beyond sluff at Adit 5 so it drains to WRP1.				

Slash-in the large downslope rills above Sediment basin 2B and above basin 3. Use bushy brush from above road. Add rocks and logs to anchor and stabilize slash so the rill doesn't get wider.	6/11/12		N	RW
Plug the rill above basin 3 where it goes under the logs. Use brush, logs, and rocks.	6/12/12		N	RW
Install a couple of new water bars at intermediate locations that wont erode down the slope, and that will reduce the amount of water flowing down the already eroded slope.				
Install a dirt berm/log/water bar at the switchback above basin 3 to cut off water from the upslope and direct it to the corner slope of the switchback, similar to the work at Adit 5.				
Put grass seed and fertilizer on the slopes/rills to help stabilize them.				
Sediment Basin #2A and 2B				
Clean out sediments and debris				
Restore road crossing into a rolling creek crossing that is made of rock with geotextile underneath to prevent soil scouring. (OK to have duders create a check dam at upper and lower sides of crossing to slow down the water and prevent scouring. Don't disturb reclamation plants on slopes at #2)				

Bypass Road				
Install a berm/water bar on bypass road where a rill has developed down to bedrock.				
Creek Crossing Bridges				
Measure the span of a bridge for each creek crossing. (12'?)				
Measure straight logs in the North Stockpile to see how many logs are 12 inch minimum diameter, straight, and over 16 feet long. Mark the ends with paint. Need 18 total logs. Look for other good logs along repository road we can trade out with crooked logs from the North Stockpile.	6/2/12	there appears to be about 15 logs Some fit the 12" diameter but exact length is unknown because they are near the bottom of the stack		
WRP3				
Repair straw wattles that have come loose.				
Check for grass growth. If no grass sprouts, how much native seed do we have left to try to get something going this spring?	6/1/12	growth is still minimal	Y	Rw
Additional Maintenance Performed				
Apply Big Game Repellant to all plants	6/2/12		n	Rw