



June 6, 2013

Ref.: 2010-084

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

Technical Memorandum
June 2013 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 June 4, 2013 site inspection of 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 plan ([Enclosure 2](#)), and photographic log ([Enclosure 3](#)).

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 onsite 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
- Condition of the erosion control and sediment control measures

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

- 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 the June 2013 site inspection. The reclamation areas were observed to be intact and in good functioning condition. The BMPs to control erosion were in good condition. No additional erosion had occurred since the May 2013 inspection in all reclamation areas. Repository drain outlets were inspected and were not found to be plugged. The site was free of snow. No water was observed to be discharging from the drain outlets with the exception of the underdrain under the repository.

The repository had no new erosion. No additional erosion was observed on the incoming Forest Road 1060 and haul roads. The stockpile areas did not appear to have any new erosion. WRP 1 had sediment filling basins 1E and 1F. However basins 1A through 1D did not have significant sediment accumulation. WRP 2, 3, and 4 had little to no new erosion and the sediment basins in these areas contained very little sediment.

The pH of water in the basins was low because water flow through the basins was primarily from mine drainage and a seasonally declining flow of surface water. The following table shows the pH for water in all sediment treatment basins. The following table shows the pH for water visible above or below the sediment/pH treatment basins. Water was observed to be flowing from WRP-1 through basins 1A through 1F and from WRP-3 through basin 3. No water was observed in sediment 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	
Entering Joe Creek	5.77	2A-below	NS	3-below	NM
1A	5.69	2A-above	NS	3-above	8.28
1B	5.66	2B-below	NS		
1C	5.47	2B-above	NS		
1D	5.37				
1E	5.45				
1F	3.61				
1F-above	5.59				

Note:

NS = no sample was collected at that location because there was no evidence of water.

The pH of the water in the WRP-1 drainage entering basin 1F was comparable to concentrations measured in April 2013. May 2013 pH readings collected in were collected using pH strips because batteries in the pH meter were empty. May 2013 pH results may not be as precise as previous tests and may also account for the lower pH readings in sediment basins 1A, 1B, 1C, 1D, 1E, 1F, and 3 as compared with June 2013. pH readings collected from sediment basin 3 in June is 1 higher than June 2012. Both readings are within a neutral measurement. pH readings in sediment basins 1A, 1B, 1C, 1D, 1E, and 1F are comparable with June 2012.

Based on the sample results, the pH of the water in basins 1A through 1F appears to be reacting with the limestone. Limestone fouling will be evaluated during clean out of the accumulated sediment during the summer maintenance activities. If the limestone has fouled, it will be blended to improve the permeability and to expose limestone that is not reacted, or replaced.

The acid seep previously entering the east side of basin 1F is being captured by the USEPA acid seep collection basin. The water seeping from adit A1N2 has been diverted by the USEPA to flow down the face of the WRP-1 bedrock to run to the acid seep collection basin. The pH in the USEPA acid seep basin was measured at 3.59, which is 0.31 pH unit lower than the May 2013 measurement. It is expected that the pH will continue to decrease as the flow of water decreases.

The USEPA acid seep basin overflow spillway is functioning due to the recent rainfall runoff and spring snowmelt. The 3.59 pH overflow water is running through the rip rap into basin 1E and comingling with the water coming down the main drainage and flowing through basin 1F. There is effectively a split flow of water between the main drainage into basin 1F and the overflow of the USEPA acid seep basin that does not fully comeingle until it reaches basin 1E. The USEPA pilot treatment system was not visibly functioning at the time of this inspection. During the site walk, USEPA was on site setting up their treatment system.

Reclamation plants and grass were inspected in all areas. A count of dead plants is no longer required for each area since the completion of the 1 year inspection period. Plants appear to be growing. Some new growth was observed. A few plants on the north storage area were turning brown, however, new spring growth was also observed on other plants. There is an adequate number of surviving plants at all areas. Grasses are becoming established at all reclamation areas.

The depth to water in the repository sump was measured at 256 inches below the rim which was the same level as was measured during the May 2013 Site Inspection. The total depth to the bottom of the sump is 326 inches. Therefore there is 70 inches of water in the sump. Water will be removed from the sump during the next site maintenance period in 2013.

Rust colored staining as observed in April 2013 on the miners trail parking area was still evident. However, the stain appeared to not have an effect on the grass which appeared healthy and growing on the miners trail parking area. The rust staining appeared to originate from a seasonal spring releasing iron mineralized water onto the parking area in April 2013. The area was dry during the June 2013 investigation. Photographs of the area are provided in the attached photographs.

Site access gates and locks are in good condition, and no evidence of unauthorized access was observed during this site inspection. Silt fences were re-secured in areas where they have been knocked down from snow. 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 Brian Wetzsteon at brian.wetzsteon@errg.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Annica Nord".

Annica Nord, LG
Project Geologist

A handwritten signature in black ink, appearing to read "Brian Wetzsteon".

Brian Wetzsteon
Northwest Construction Manager

AN/bw

Encl.: [Enclosure 1](#) – June 2013 Blue Ledge Mine Inspection Checklist
[Enclosure 2](#) – Overall Site Plan
[Enclosure 3](#) – June 2013 Site Inspection Photographic Log

cc: ERRG Project File

Enclosure 1. June 2013 Blue Ledge Mine Inspection Checklist

**BLUE LEDGE MINE
INSPECTION CHECKLIST**

MONTHLY INSPECTION
Month: June, Year: 2013

BLUE LEDGE MINE MONTHLY INSPECTION CHECKLIST

Month: June Year: 2013

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

NOTE: All photographs associated with this checklist were taken on June 4, 2013; Refer to Enclosures 2 and 3 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: All SWPPP controls are in place and functioning. No evidence of any erosion.

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: Wattles, Flexterra, and bark are functioning on the repository.

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: _____

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: Depth to water is 256 inches from the rim, bottom of sump is 326 inches, total water depth 70 inches.

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: The southernmost anchor trench drain pipe is not blocked but no water is flowing from the drain.

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: The drain is not blocked and a small trickle of water is flowing out (see photo log).

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: Plants still appear small and show signs of animals nibbling. They are the same size as observed in May.

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 the RACR.*

Comments: The grass is growing well but the plants remain small.

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: The top deck hydroseeded area is growing and appears healthy. The existing grass on the slope appears healthy.

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: The water bars are in good condition.

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: Plants show new growth and appear healthy.

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: The tops of the cedars have been eaten by deer but the plants remain healthy. The pines have new spring growth.

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: This area has sufficient live plants. Plants look healthy. Most pines have new spring growth and a few appear to be dying. 80% of the plants are alive.

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: The uphill silt fence has been knocked down by snow and should be removed. The downhill fence is standing and functional.

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: Plants appear to have new spring growth.

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: There is no existing silt fence. The ground is vegetated and appears to be stable.

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: Plants show new growth and appear healthy.

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: This area has sufficient live plants.

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: Very good grass growth in this area.

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: _____

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 marked and are clear for drainage.

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: _____

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: _____

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: Grass is growing on the roads. Plants on the miners trail parking area appear to be growing. A red rust stain in two separate patches of soil were observed similar to April 2013. The soil is no longer wet and plants are growing both in and around the red stain and appear to be unaffected. The red stain appears to be a stain from a springtime seep with iron mineralized water. (see photo log).

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: Straw wattles are in good condition and in place.

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: _____ 4.

Have an

**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: Plants show new growth and appear healthy.

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: _____

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 Joe Creek):

Accumulated sediment: 10%

Fouled limestone: N/A

pH in basin 1A: 5.69

pH below basin 1A: 5.77

Water depth: Water is flowing through full basin.

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1B:

Accumulated sediment: 10%

Fouled limestone: N/A

pH in basin 1B: 5.66

Water depth: Water is flowing through full basin.

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1C:

Accumulated sediment: 20%

Fouled limestone: N/A

pH in basin 1C: 5.47

Water depth: Water is flowing through full basin.

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1D:

Accumulated sediment: 30%

Fouled limestone: N/A

pH in basin 1D: 5.37

Water depth: Water is flowing through full basin.

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1E:

Accumulated sediment: 80%

Fouled limestone: N/A

pH in basin 1E: 5.40

Water depth: Water is flowing through full basin.

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 1F:

Accumulated sediment: 100%

Fouled limestone: N/A

pH in basin 1F: 5.40

pH above basin 1F: 5.59

Water depth: Water is flowing through full basin.

Excessive erosion around the basin? Yes* No

USEPA Acid Seep Collection Basin:

pH in basin: 3.61

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: _____

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: _____

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: 10%

Fouled limestone: N/A

pH in basin 2A: Not measured; no water in the basin

pH above basin 2A: Not measured; no water in the basin

Water depth: No water in the basin.

Excessive erosion around the basin? Yes* No

Sediment Treatment Basin 2B:

Accumulated sediment: 20%

Fouled limestone: N/A

pH in basin 2B: Not measured; no water in the basin

pH above basin 2B: Not measured; no water in the basin

Water depth: No water in the basin.

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: Straw wattles are in place. Silt fence on the south side was repaired.

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: _____

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: _____

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 erosion noted.

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: 10%

Fouled limestone: N/A

pH in basin 3: 8.28

pH above basin 3: 8.44

Water depth: Water flowing through the full basin

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: _____

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: _____

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: Plants looks healthy and show new growth.

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)

Time 11:00 am to 3:30 pm. The weather was sunny and clear, temperature 77°F, 9 miles per hour North-Northeast wind. The gates and locks were in good condition with no unauthorized access noted. The site is in very good condition. No maintenance is required. Streams appear to be running clear. Drainages are running water into the basins. There is no evidence of snow at the site.

Silt fences along creek crossings were re-hammered in place and straightened. The rust area at the miners trail parking lot is still evident but appears to not be affecting the plant growth. This area was observed to be dry during the site investigation. EPA (Bonnie, Nick, and one other employee) was on site working on their remediation system above basin 1F. No one else was on site. No unauthorized access was observed.

Annica Nord
Name of Inspector(s)

Engineering/Remediation Resources Group, Inc. (ERRG)
Company



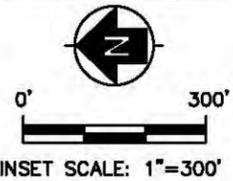
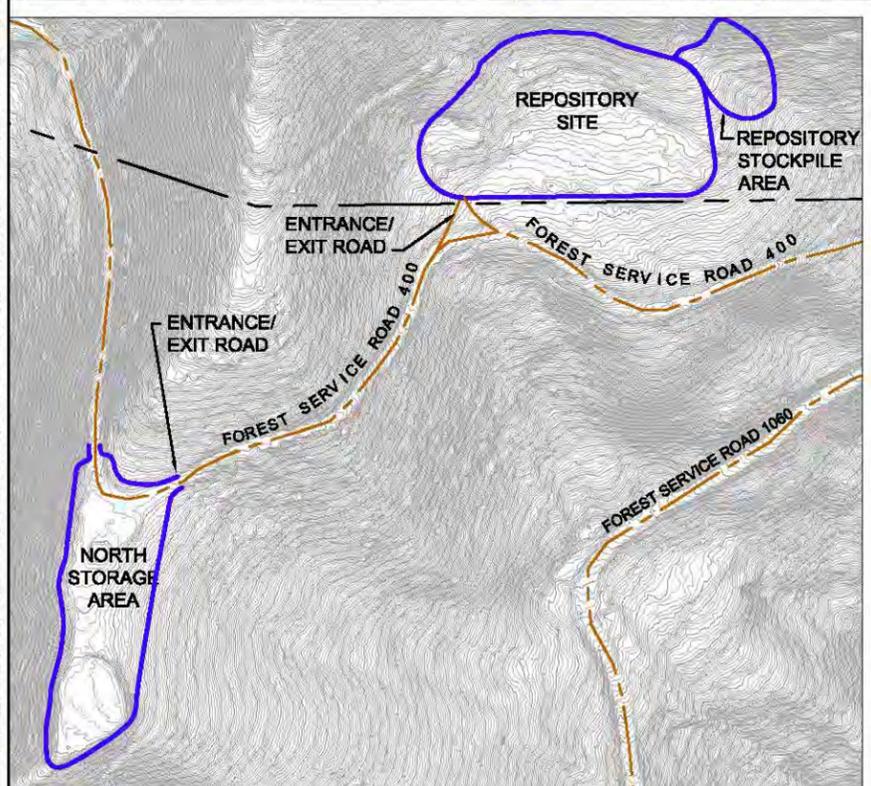
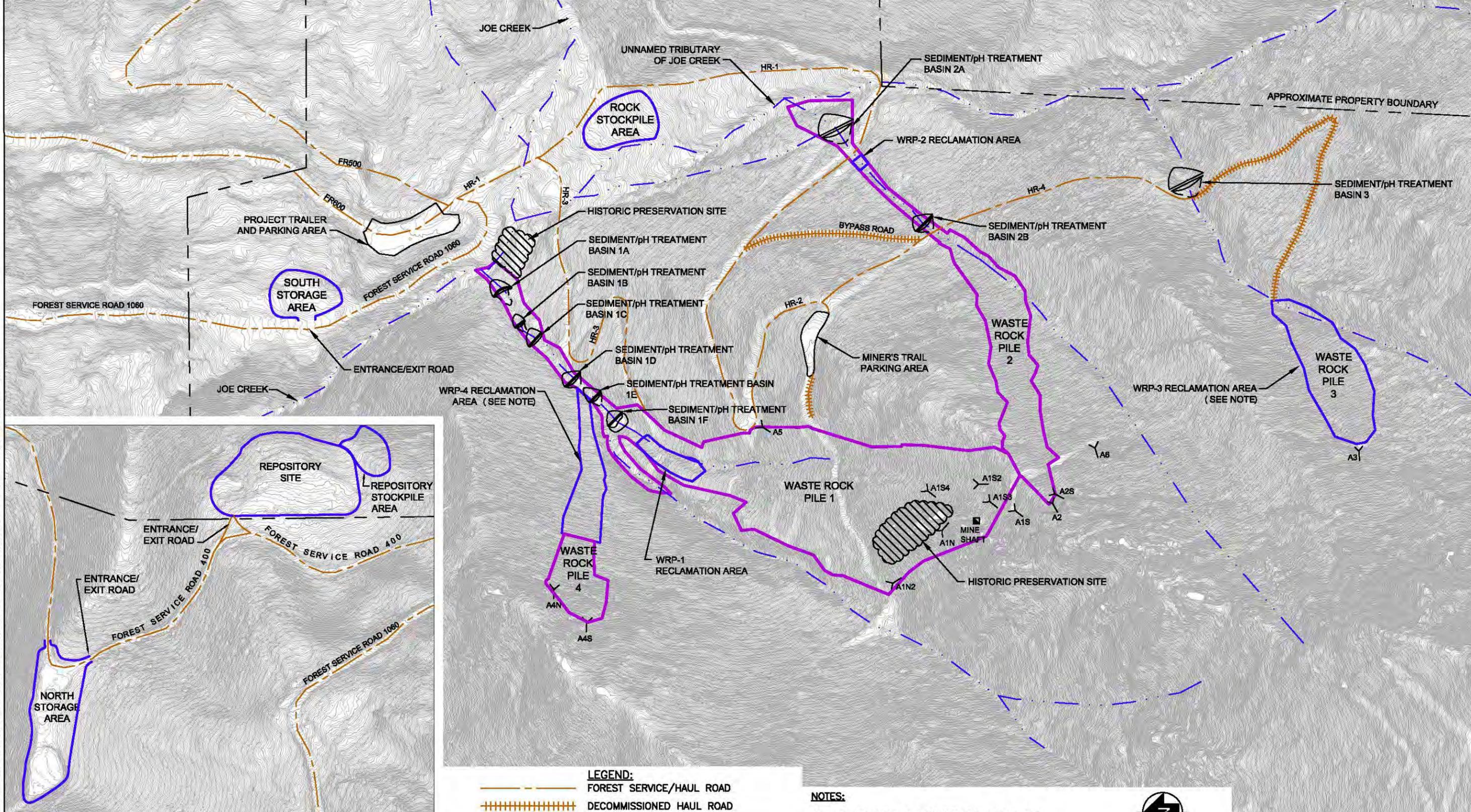
Signature of Inspector

June 4, 2013

Date of Inspection

Enclosure 2. Overall Site Plan

FILE NAME: N:\Graphics\2010\2010-084 USFS Blueledge Mine\Maps and Drawings\Final Report\Overall Site Plan 2.dwg LAYOUT NAME: 2 PLOTTED: Tuesday, May 26, 2012 - 11:08am

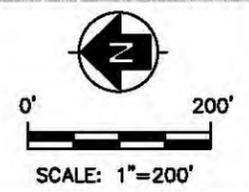


- LEGEND:**
- FOREST SERVICE/HAUL ROAD
 - DECOMMISSIONED HAUL ROAD
 - PROPERTY BOUNDARY
 - RECLAMATION AREA
 - STREAM
 - WASTE ROCK BOUNDARY REMOVAL LIMIT
 - APPROXIMATE LOCATION OF ADIT
 - APPROXIMATE LOCATION OF MINE SHAFT

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.

ERRG 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:	CHECKED BY:	PROJECT NO.
		RDB 11/18/11	JGS 11/21/11	2010-084
				ENCLOSURE 2

Enclosure 3. June 2013 Site Inspection Photographic Log



Photograph 1: Joe Creek at Joe Creek Bridge.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 2: View of access road, facing south. Note there is no evidence of erosion.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 3: View of the top of the repository, facing south. Grass is becoming established.

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

Date: June 4, 2013



Photograph 4: Plant on the repository are alive but remain small.

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

Date: June 4, 2013



Photograph 5: Repository Stockpile Area with hydroseed and reclamation planting.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: June 4, 2013



Photograph 6: Anchor trench drain outlet, south end of repository. No water.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: June 4, 2013



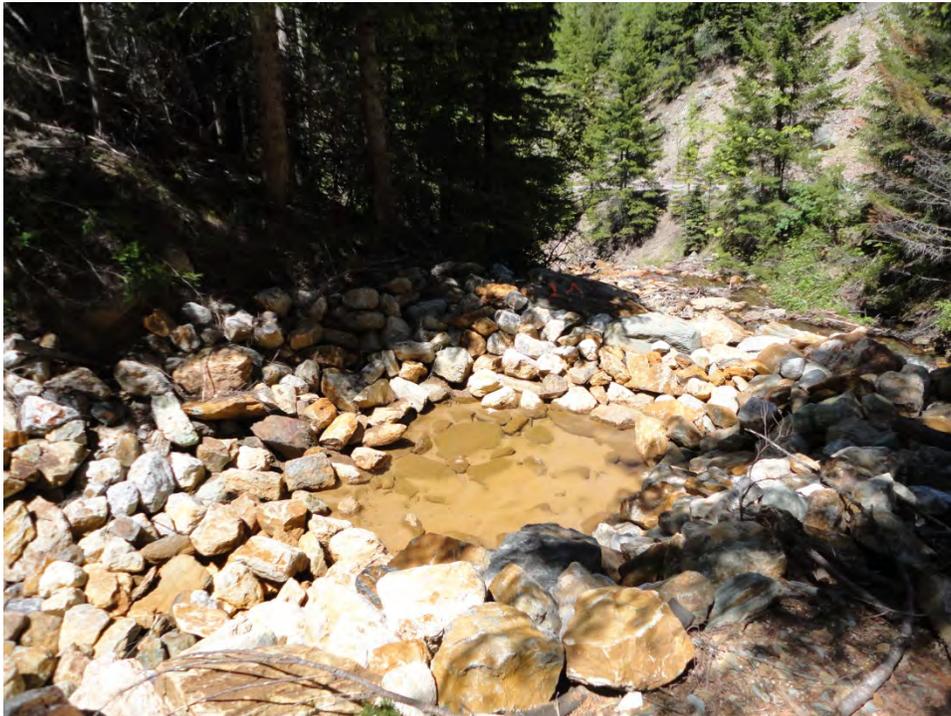
Photograph 7: North storage area with hydroseed and reclamation planting.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 8: New growth on pines at North Storage area.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 9: Sediment/pH Treatment Basin 1A.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 10: Sediment/pH Treatment Basin 1B.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
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Date: June 4, 2013



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

Date: June 4, 2013



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

Date: June 4, 2013



Photograph 13: Sediment/pH Treatment Basin 1E. Mostly filled with sediment.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 14: Sediment/pH Treatment Basin 1F(right) and EPA treatment basin (left). Sediment from the EPA treatment basin was cleaned out and placed into 1F on 6/3/2013.

Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
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Date: June 4, 2013



Photograph 15: WRP-1 reclamation area and plants.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 16: Sediment/pH Treatment Basin 2A.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



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

Date: June 4, 2013



Photograph 18: WRP-2 reclamation area plants.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: June 4, 2013



Photograph 19: Sediment/pH Treatment Basin 3.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 20: WRP-3 reclamation plants and grass.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 21: WRP-4 reclamation plants and reinforced erosion fabric.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 22: Rock Stockpile Area with hydroseed and reclamation planting.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 23: Close-up of cedar tree on Rock Stockpile Area.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 24: Rust-colored staining on ground at the miners trail parking area.
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Photographed by: Annica Nord (ERRG)

Date: June 4, 2013



Photograph 25: Closeup of rust-colored staining on ground at the miners trail parking area. Note plants do not appear to be affected by the stained area.

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

Date: June 4, 2013



Photograph 26: Silt fences along creek crossings were straightened.

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

Date: June 4, 2013