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May 13, 2014 Ref.: 2010-084

Mr. Jonathan Heyl
On-Scene Coordinator
USDA Forest Service, Region 6
1220 Southwest 3rd Avenue
Portland, Oregon 97204

Technical Memorandum
May 2014 Site Inspection Report
Blue Ledge Mine
Rogue River-Siskiyou National Forest

Dear Mr. Heyl:

Engineering/Remediation Resources Group, Inc. (ERRG) is submitting this technical memorandum summarizing the site inspection performed on May 6, 2014 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 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."

ERRG

- 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 May 2014 site inspection. The reclamation areas were observed to be intact and in good functioning condition. The BMPs to control erosion were in good condition. However, minor erosion rills were evident near the repository sump below the access road and were filled in with soil. No new erosion was observed on the incoming Forest Road 1060 and haul roads. Overall, the roads were in very good shape. The stockpile areas and WRPs 1, 2, 3, and 4 were observed to have no excessive erosion. Sediment basin 1F and the EPA acid seep basin were filled with sediment. Basin 1E was half full of sediment. The remainder of the basins (1A through 1D, 2A, 2B, and 3) have minimal accumulated sediment. This sediment accumulation is normal based on previous year's experience at the site. Repository drain outlets were inspected and were found to not be plugged, however, the screen was damaged on all repository drain outlets as observed in April 2014. The mesh screen was replaced with a heavier-duty galvanized screen. No water was observed to be discharging from the drain outlets. A small amount of water was flowing from the discharge pipe from the underdrain under the repository and the mesh screen was intact.

The following table shows the pH of the water in the Sediment Treatment Basins. No water was observed in basin 2A, 2B, or below basin 3, thus no samples were collected from these locations during this site inspection.

Table 1. pH of Sediment Treatment Basins

WRP-1		WRP-2		WRP-3	
Below 1A	4.8	2A-below	NS	3-below	NS
1A	4.6	2A-above	NS	3-above	6.1
1B	4.4	2B-below	NS		
1C	4.3	2B-above	6.9		
1D	4.2				
1E	4.1				
1F	4.7				
1F-above	4.8				

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

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 2.9, which is 0.67 lower than the April 2014 measurement. Measurements in May 2014 were collected using a YSI multi-parameter probe instead of the pH meter typically used to measure pH. This may account for differences between the April 2014 readings and the May 2014 readings. The USEPA acid seep basin overflow spillway is functioning. The 2.9 pH overflow is running through the rip rap into basin 1E and comingling with the water coming down the main drainage and flowing through basin 1F. This is likely why the pH in basin 1E is much lower than bain 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 comingle until it reaches basin 1E. Basins 1E through 1A raised the pH by more than half a unit from 4.1 to 4.8 before entering Joe Creek. The limestone in the basins appears to be successful in raising the pH prior to entry into Joe Creek. The USEPA pilot treatment system was not visibly functioning at the time of this inspection.

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. Most plants remained mostly dormant from the winter however, some new buds were observed. 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 during the site inspection on May 6, 2014 was measured at 244 inches below the rim. The total depth to the bottom of the sump is 326 inches. Therefore there is 82 inches of water in the sump, which is 0.5 inches higher than the measurement from the April 2014 Site Inspection. This increase in sump water level is consistent with the Repository Sump Evaluation prepared by ERRG in November 2013 which predicted the rate of inflow would slow as trapped rainwater finishes passing through the waste rock thickness. The sump water level in April and May 2013 was measured to be 8 inches higher as compared with the previous sump water level measurement collected in November 2012. pH was measured at the surface to be 3.56 which is consistent with the April 2014 pH of 3.8. However, after removing 500 gallons of water from the sump, a sample of the water was measured to have a pH of 5.47. This sample is believed to be representative of the overall water volume contained in the repository drainage collection system. The previous sump water samples were collected at the surface and a rust colored film was observed. The sump water surface exposed to air may oxidize through contact with sulfide minerals in the water such as iron pyrite, resulting in acid generation at the surface of the sump. Based on the elevation of sump water, the volume of water in the sump drainage collection system is estimated to be approximately 71,500 gallons. Sump water level measurements will continue to be recorded during the monthly site inspections.

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 Annica Nord at annica.nord@errg.com or Brian Wetzsteon at brian.wetzsteon@errg.com.

Sincerely,

Annica Nord, LG
Project Geologist

Brian Wetzsteon
Northwest Construction Manager

AN/bw

Encl.: Enclosure 1 – May 2014 Blue Ledge Mine Inspection Checklist
Enclosure 2 – Overall Site Plan
Enclosure 3 – May 2014 Site Inspection Photographic Log

cc: ERRG Project File

Encosure 1. May 2014 Blue Ledge Mine Inspection Checklist

BLUE LEDGE MINE
INSPECTION CHECKLIST

MONTHLY INSPECTION
Month: May**, Year:** 2014

BLUE LEDGE MINE MONTHLY INSPECTION CHECKLIST
Month: May **Year:** 2014

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

NOTE: All photographs associated with this checklist were taken on May 6, 2014; 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: Straw wattles, Flexterra, and bark are functioning properly.

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: Minor erosion rills are evident downslope from the sump. They were filled with soil and bark. See photographs.

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 244 inches from the rim, bottom of sump is 326 inches, total water depth 82 inches. pH of the water is 5.47 (measured with the YSI). Leachate sump tank and cap are locked and in good condition.

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 anchor trench drain pipes are not blocked and no water is flowing from the drain. The screen was previously repaired with a second layer of screen over the pipe however, animals have scraped through the second layer. A thicker, more durable galvanized screen replaced the damaged screen on all anchor trench drains. The underdrain is not blocked and a small stream of water is flowing from the pipe. The screen is intact and not damaged.

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: Plants appear healthy. The plants are small as a result of heavy browsing by deer but remain alive.

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 appears to be well established. The majority of repository replacement plants (planted in October 2012) have survived, but have been heavily browsed by deer. Repository shrubs appear stunted due to the heavy browsing.

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 grass appears to be well established.

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: Grass appears to be established.

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: Planted trees show 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.

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 is no longer needed and was previously removed. The lower silt fence is intact.

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 are growing and becoming established.

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: The plants show new spring growth.

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 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: _____

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: _____

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.

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 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: The upper tier of the reclamation area is devoid of plants, likely due to seepage of acidic mine drainage from the adjacent bedrock. This area is approximately 20 feet by 30 feet and no plants have survived.

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: 4.55

   pH below basin 1A: 4.80 (in Joe Creek)

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: 4.42
Water depth: Water is flowing through full basin
Excessive erosion around the basin? ☐Yes* ☒No

Sediment Treatment Basin 1C:
Accumulated sediment: 10%
Fouled limestone: N/A
pH in basin 1C: 4.31
Water depth: Water is flowing through full basin
Excessive erosion around the basin? ☐Yes* ☒No

Sediment Treatment Basin 1D:
Accumulated sediment: 15%
Fouled limestone: N/A
pH in basin 1D: 4.19
Water depth: Water is flowing through full basin
Excessive erosion around the basin? ☐Yes* ☒No

Sediment Treatment Basin 1E:
Accumulated sediment: 60%
Fouled limestone: N/A
pH in basin 1E: 4.13
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: 4.65
pH above basin 1F: 4.80
Water depth: Water is flowing through full basin
Excessive erosion around the basin? ☐Yes* ☒No

USEPA Acid Seep Collection Basin:

pH in basin: 2.90

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: Silt fence on the north (upper) side of sediment basins 2A and 2B were previously removed.

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

   Water depth: No water in the basin.

   Excessive erosion around the basin? ☐Yes* ☒No

Sediment Treatment Basin 2B:

Accumulated sediment: 30%

Fouled limestone: N/A

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

pH above basin 2B: 6.9

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 (upper) side of sediment basin 3 was previously removed.

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: Grass appears to be stable.

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: 15%

   Fouled limestone: N/A

   pH in basin 3: 6.09

   pH below basin 3: Not Measured. No accessible water below basin

   Water depth: 9 inches

   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.

4. Are there areas of excessive erosion on WRP-4? ☐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 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)

5/6/14 Time 8:00 a.m. to 4:45 p.m. The weather was sunny with clouds and a light breeze, temperature 55°F. The gates and locks were in good condition with no unauthorized access noted. Minor erosion rills were evident near the repository sump. The rills have been filled in with soil. The site is in good condition. Streams appear to be running clear. Water flowing through basins 1F through 1A and 3 was evident. Basins 2A and 2B were moist but no water was observed in the basins. A YSI Water Quality meter was used to measure pH instead of the pH meter typically used. The YSI generally produced lower results than the pH meter.

EPA treatment system above basin 1F does not appear to be operating.

Annica Nord
Name of Inspector(s)

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

May 6, 2014

Signature of Inspector Date of Inspection

Enclosure 2. Overall Site Plan

JOE CREEK
UNNAMED TRIBUTARY OF JOE CREEK
HR-1
SEDIMENT/pH TREATMENT BASIN 2A
APPROXIMATE PROPERTY BOUNDARY
ROCK STOCKPILE AREA
WRP-2 RECLAMATION AREA
FR500
FR600
HR-1
HR-3
HR-4
SEDIMENT/pH TREATMENT BASIN 3
PROJECT TRAILER AND PARKING AREA
HISTORIC PRESERVATION SITE
BYPASS ROAD
SEDIMENT/pH TREATMENT BASIN 2B
SEDIMENT/pH TREATMENT BASIN 1A
FOREST SERVICE ROAD 1060
SEDIMENT/pH TREATMENT BASIN 1B
SOUTH STORAGE AREA
FOREST SERVICE ROAD 1060
SEDIMENT/pH TREATMENT BASIN 1C
HR-2
HR-3
WASTE ROCK PILE 2
SEDIMENT/pH TREATMENT BASIN 1D
MINER'S TRAIL PARKING AREA
ENTRANCE/EXIT ROAD
JOE CREEK
SEDIMENT/pH TREATMENT BASIN 1E
WRP-4 RECLAMATION AREA (SEE NOTE)
SEDIMENT/pH TREATMENT BASIN 1F
A5
WRP-3 RECLAMATION AREA (SEE NOTE)
WASTE ROCK PILE 3
A6
A3
A1S4
A1S2
A1S3
A2S
A1S
A2
WASTE ROCK PILE 1
MINE SHAFT
A1N
WASTE ROCK PILE 4
WRP-1 RECLAMATION AREA
A1N2
HISTORIC PRESERVATION SITE
A4N
A4S

REPOSITORY SITE
REPOSITORY STOCKPILE AREA
ENTRANCE/ EXIT ROAD
FOREST SERVICE ROAD 400
ENTRANCE/ EXIT ROAD
FOREST SERVICE ROAD 400
FOREST SERVICE ROAD 1060
NORTH STORAGE AREA

0' 300'
INSET SCALE: 1"=300'

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

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

0' 200'
SCALE: 1"=200'

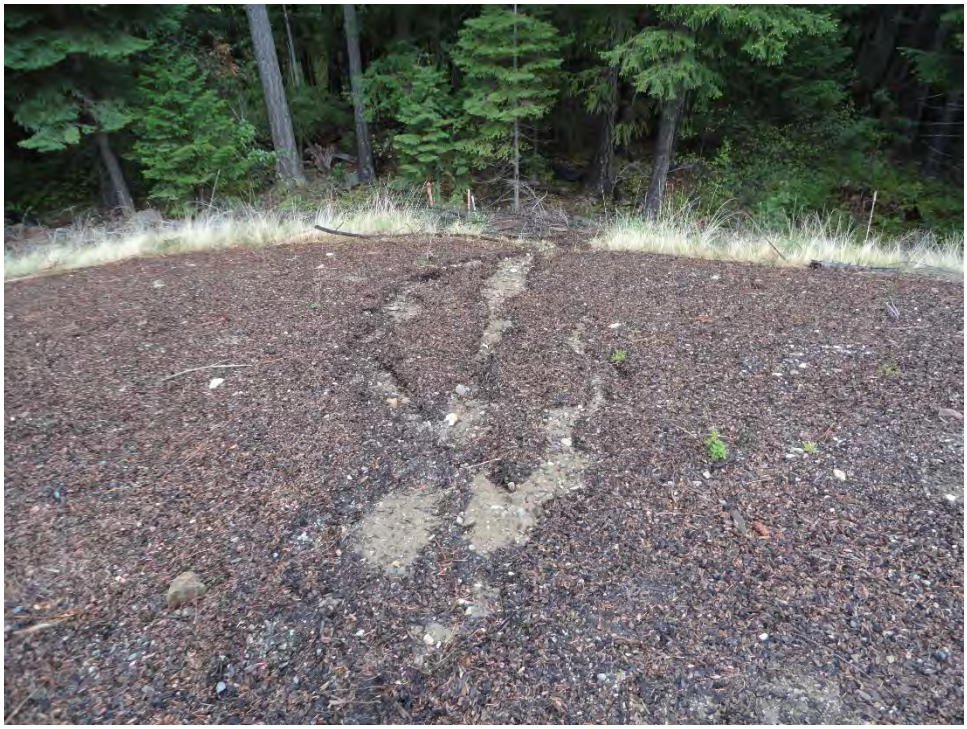
ERRG
Engineering/Remediation Resources Group, Inc.
4585 Pacheco Blvd, Suite 200
Martinez, California 94553
(925) 969-0750

CLIENT: USDA FOREST SERVICE	OVERALL SITE PLAN			
LOCATION: BLUE LEDGE MINE REMOVAL ACTION	DRAWN BY: RDB 11/18/11	CHECKED BY: JGS 11/21/11	PROJECT NO. 2010-084	ENCLOSURE 2

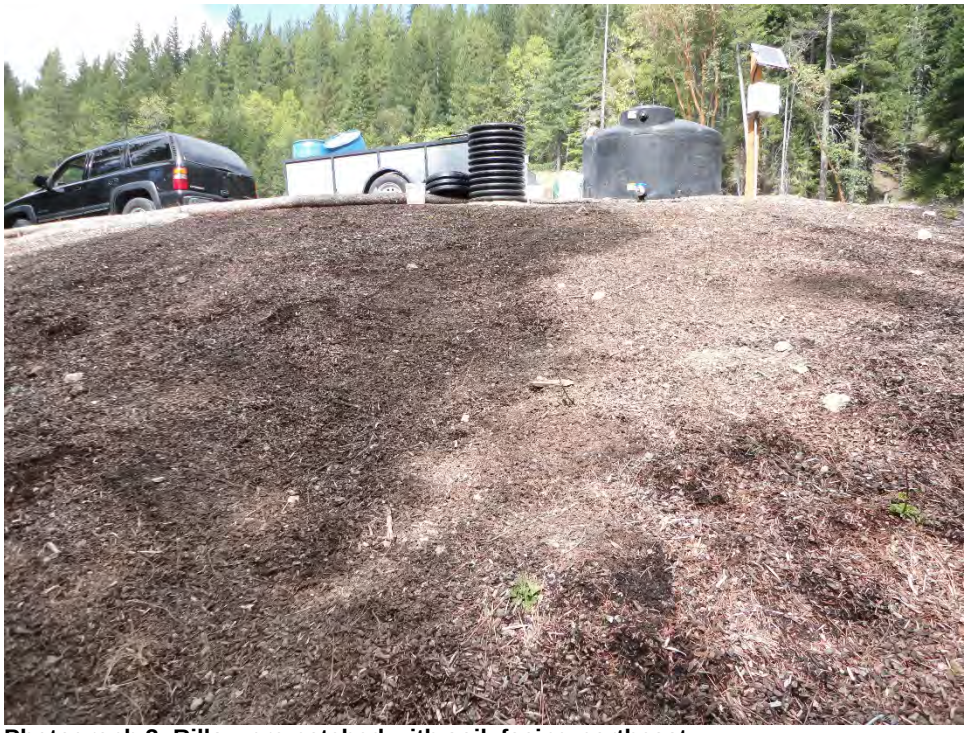
FILE NAME: N:\Graphics\2010\2010-084 USFS Blueledge Mine\N_Maps and Drawings\Final Report\Overall Site Plan 2.dwg LAYOUT NAME: 2 PLOTTED: Tuesday, May 29, 2012 – 11:09am

Enclosure 3. May 2014 Site Inspection Photographic Log

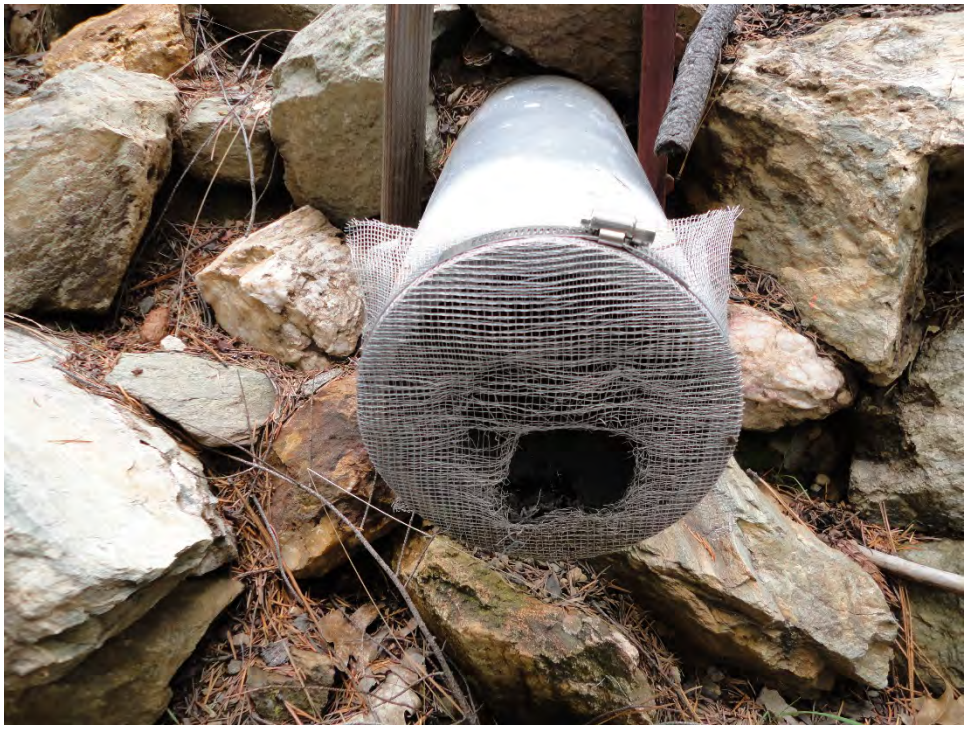
Photograph 1: View of access road, facing south. Note there is no evidence of erosion.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



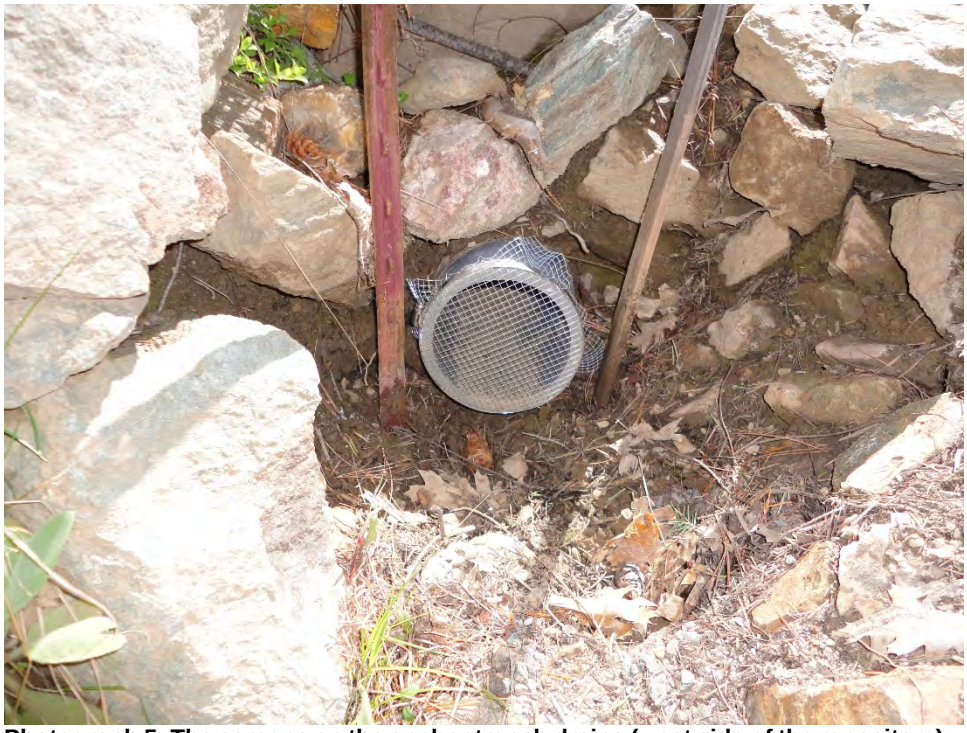
Photograph 2: Erosion rills below the sump. Rills were later patched with soil.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



Photograph 3: Rills were patched with soil, facing northeast.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



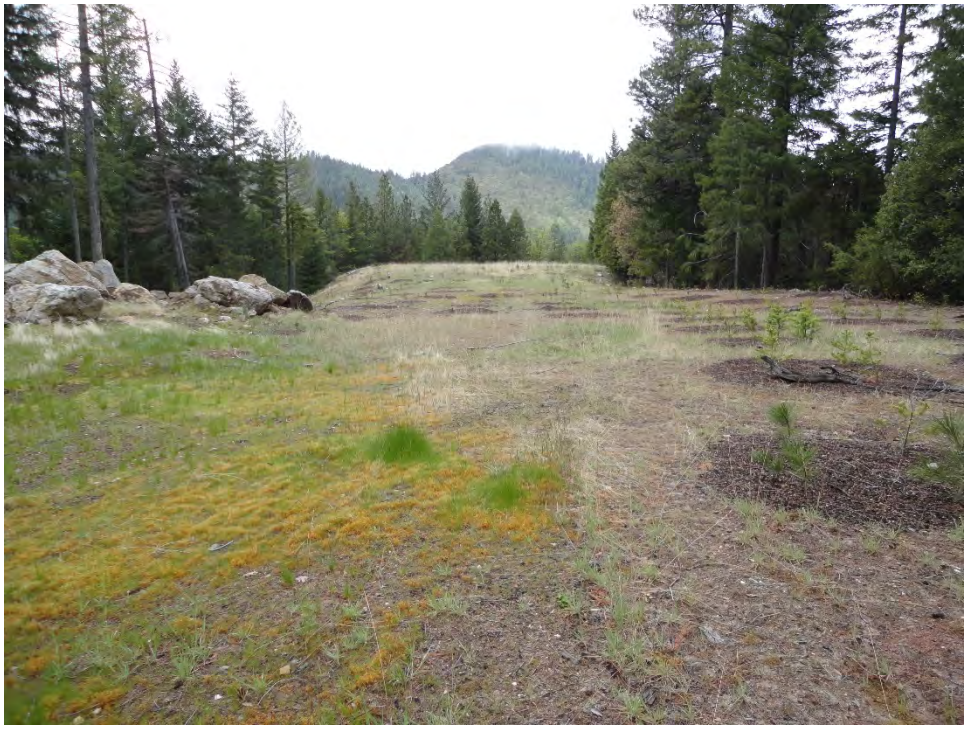
Photograph 4: Anchor trench drain outlet water discharge, west side of repository.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



Photograph 5: The screens on the anchor trench drains (west side of the repository) were replaced with more robust galvanized screens.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

Photograph 6: Repository Stockpile Area with hydroseed and reclamation planting.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

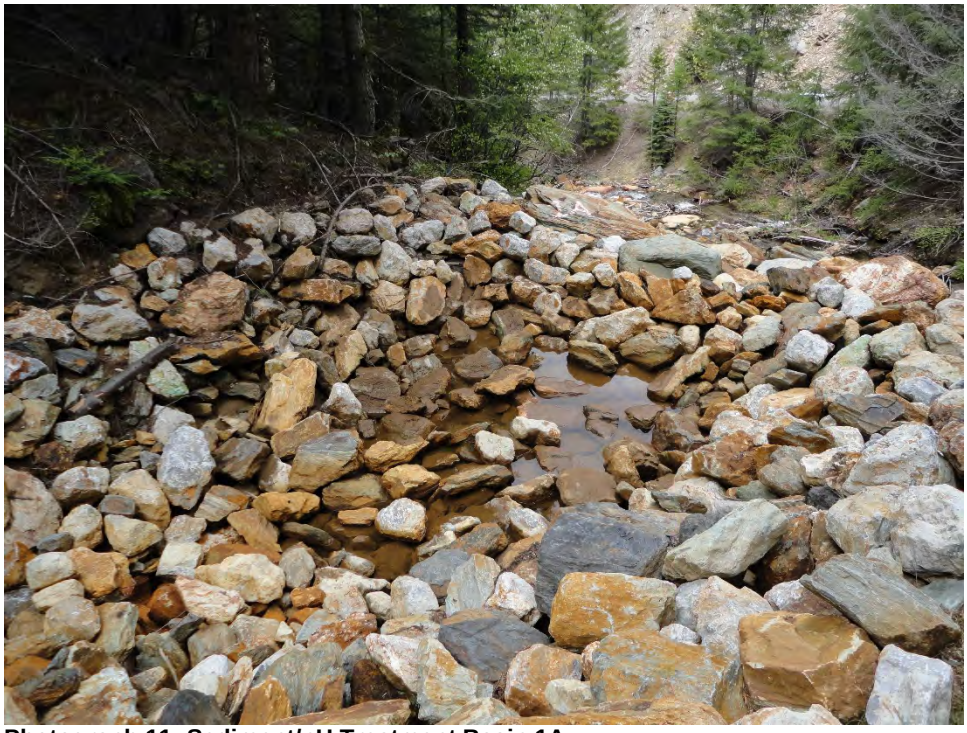
Photograph 7: Hydroseeded top of repository looking south.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



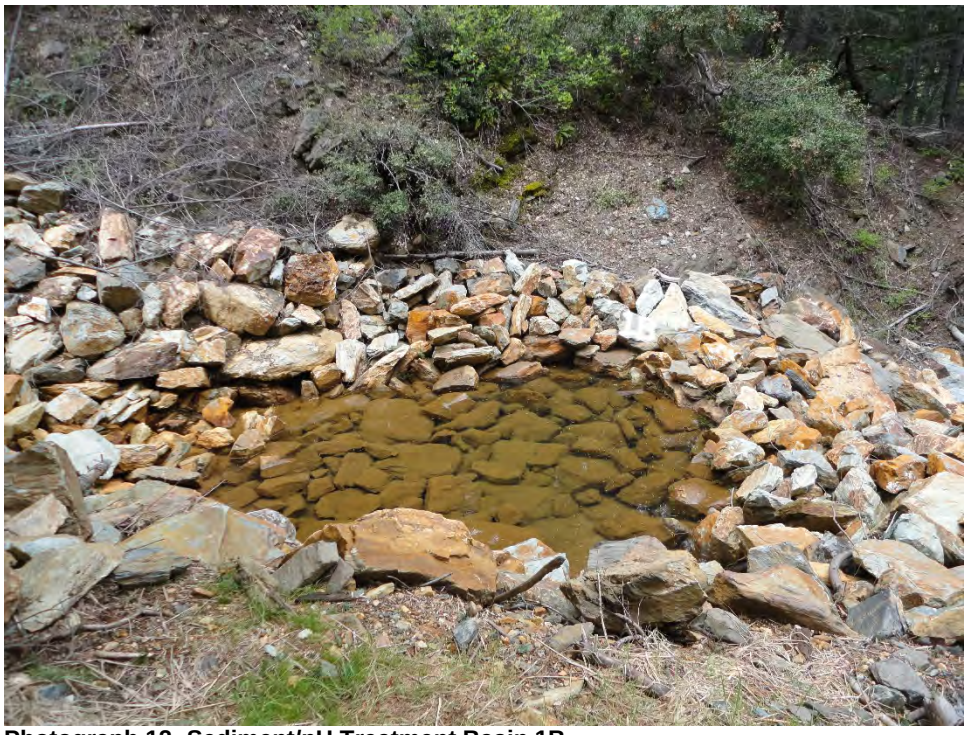
Photograph 8: North Storage area looking west.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

Photograph 9: Plants at the North Storage area.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

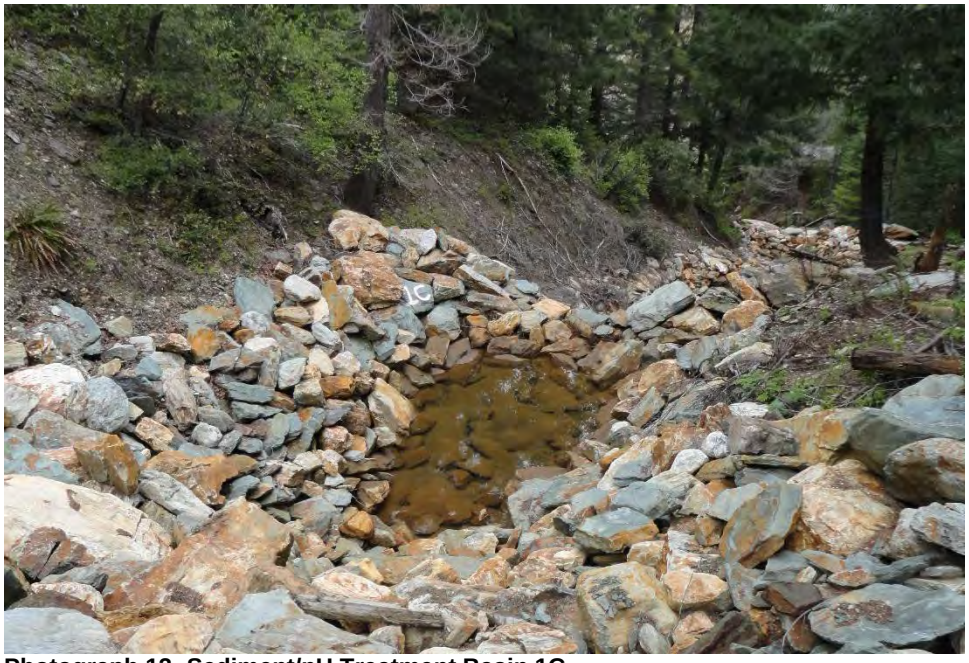
Photograph 10: South Storage area looking northeast. Plants show some spring growth.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



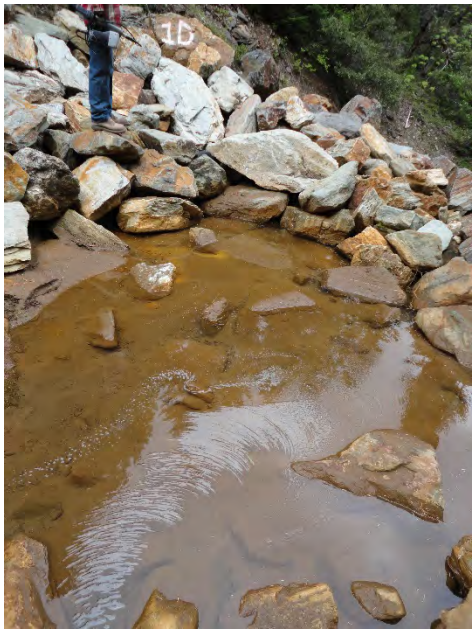
Photograph 11: Sediment/pH Treatment Basin 1A.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



Photograph 12: Sediment/pH Treatment Basin 1B.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

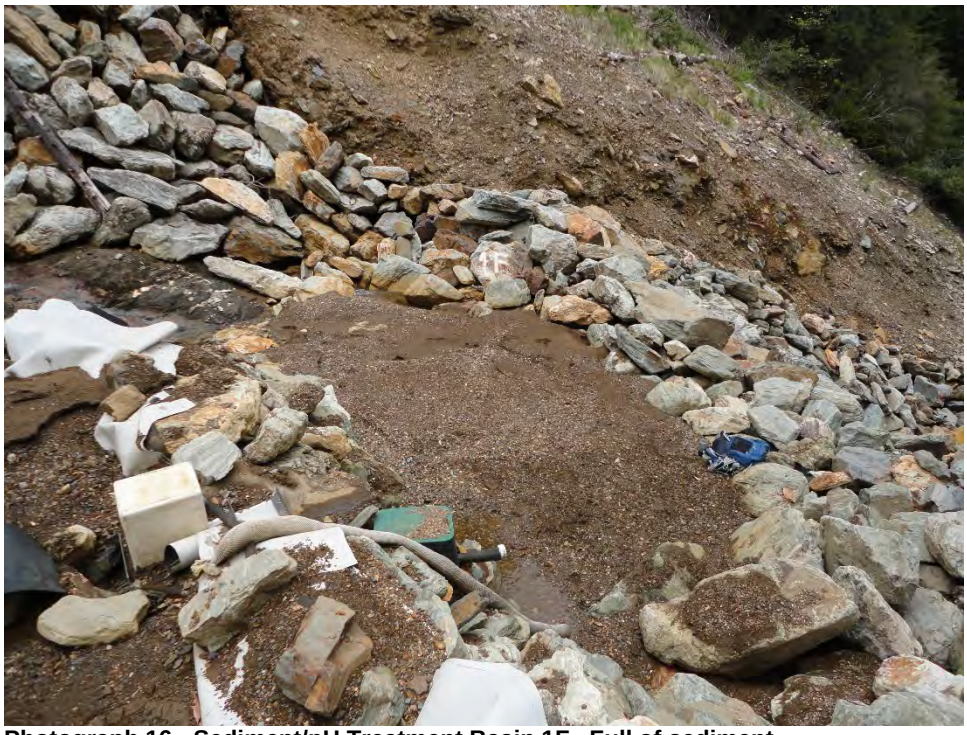


Photograph 13: Sediment/pH Treatment Basin 1C.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

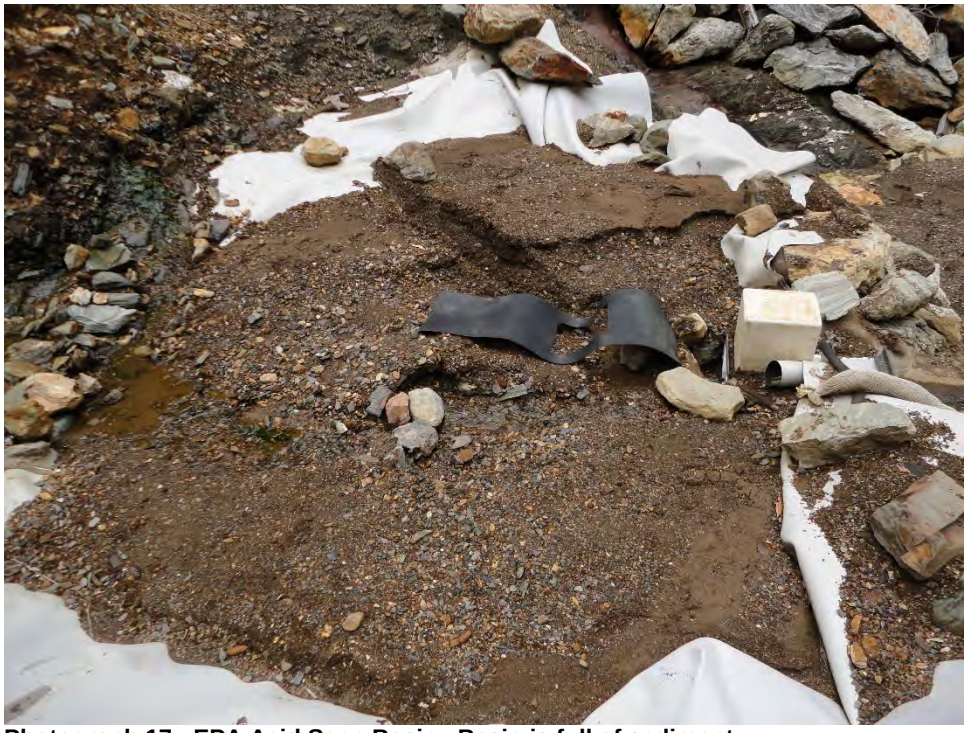


Photograph 14: Sediment/pH Treatment Basin 1D.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

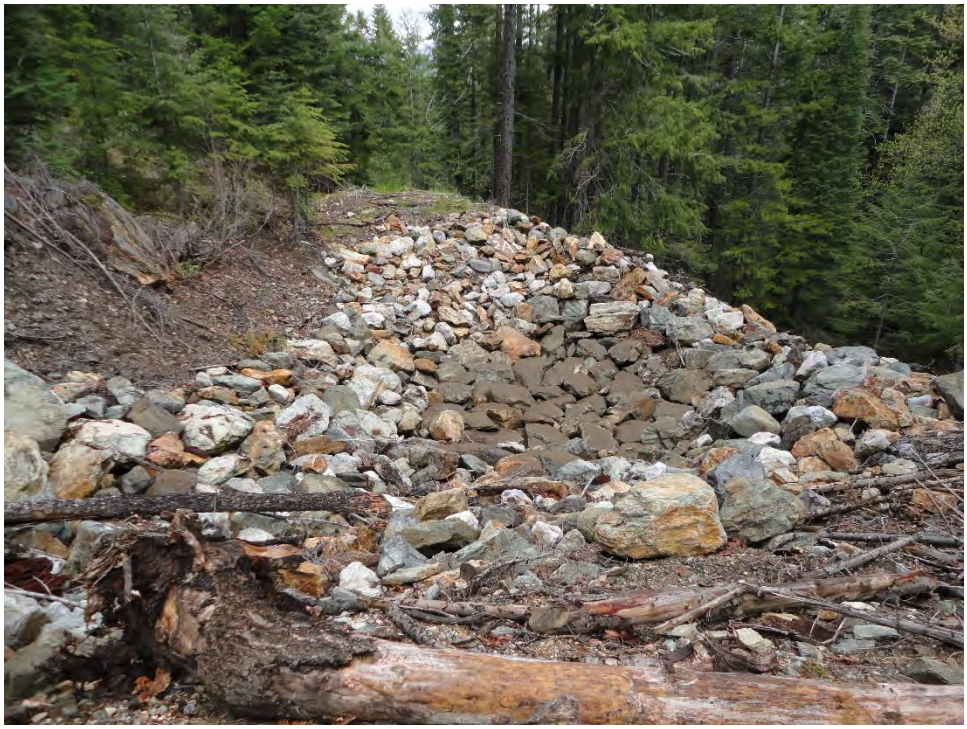
Photograph 15: Sediment/pH Treatment Basin 1E. Full of sediment.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



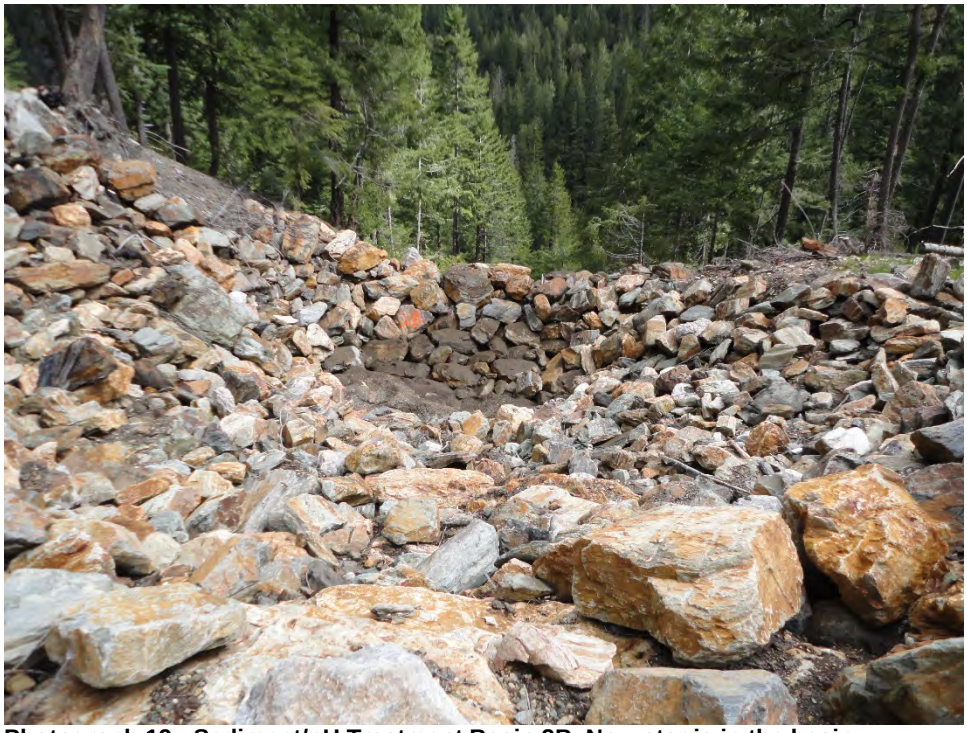
Photograph 16: Sediment/pH Treatment Basin 1F. Full of sediment.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



Photograph 17: EPA Acid Seep Basin. Basin is full of sediment.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

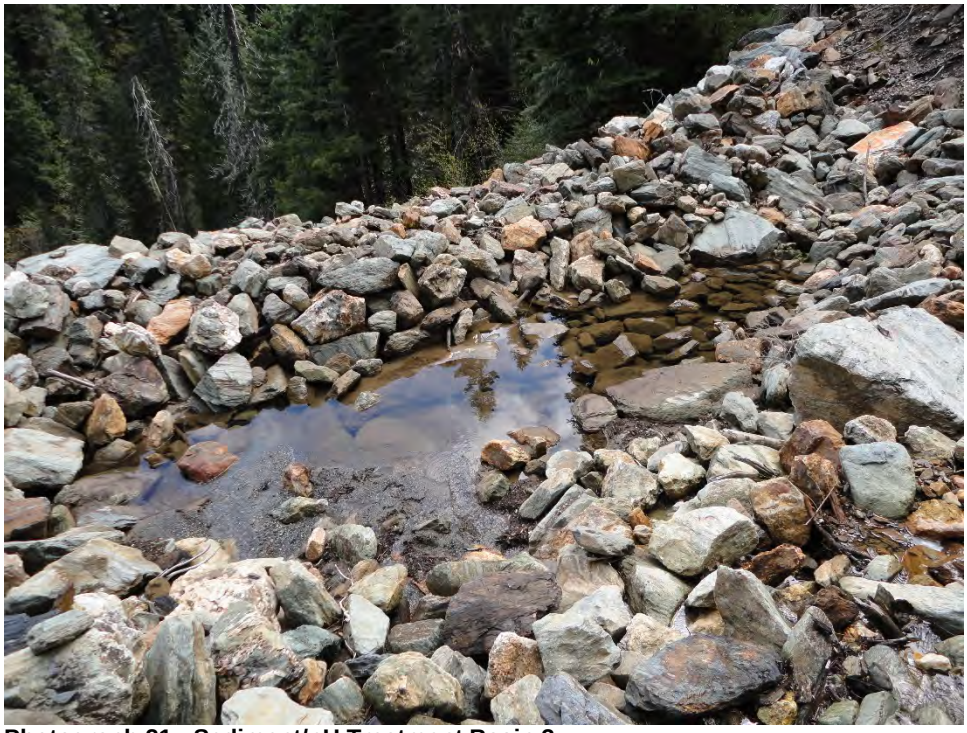


Photograph 18: Sediment/pH Treatment Basin 2A. No water in the basin.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



Photograph 19: Sediment/pH Treatment Basin 2B. No water is in the basin.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

Photograph 20: Rock Stockpile reclamation plants and grass looking west.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014



Photograph 21: Sediment/pH Treatment Basin 3.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014

Photograph 22: WRP-3 reclamation plants and grass.
Blue Ledge Mine, Rogue River - Siskiyou National Forest, CA
Photographed by: Annica Nord (ERRG) Date: May 6, 2014