

C0070011 Incoming ✓
#5300

HIAWATHA COAL COMPANY

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September 29, 2017

Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
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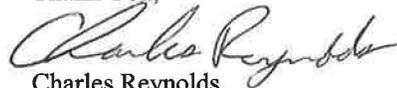
DIV. OF OIL, GAS & MINING

Re: Phase I and III Bond Release for a portion of Slurry Pond 5 and Sediment Pond 7, Hiawatha Mine Complex, C/007/011, Task #5300.

Enclosed are the clean copies of the amended pages which were approved on July 12, 2017. The pages include the requested changes to pages 2-32 and 2-33 (Table II-12). Hiawatha Coal Company does not intend to initiate a change in the bond itself, but intends to maintain the existing bond as it is.

If you have any questions, please call me at (801) 857-0399

Thank You,



Charles Reynolds,
Mine Manager

Borrow Areas E and F

In the spring of 1993, U.S. Fuel Company investigated two potential substitute topsoil borrow sites adjacent to slurry ponds 1 and 4. These sites, identified as alternative substitute borrow areas E and F and shown on Exhibit II-4A, were investigated because of their closer proximity to the slurry ponds and waste disposal areas where topsoil will be required.

EarthFax Engineering Inc. was contracted to conduct field investigations and to determine the feasibility of utilizing these sites. Pedon examinations and soil sample analyses indicate that areas E and F contain soils with physical and chemical properties suitable for use as substitute topsoil material and that there is sufficient material available to justify their use.

Borrow Area "F" was subsequently used to reclaim the Refuse Pile No. 2 and No. 4 Slurry Pond Area. Borrow Area "E" remains designated as a "Potential Borrow Area" (Exhibit II-4A).

Potential Borrow Area E

Borrow area E comprises 6.6 acres and consists of the same Haverdad family of soils as areas B, C and D. See discussion of Haverdad series in Appendix II-4, Section 1. Physical and chemical analyses results from representative test pits in area E are given in Appendix II-4, Table 1.4.

A volume of at least 53,000 cubic yards is available from this site by excavating the 6.6 acres to a depth of 5 feet.

Borrow Area F

This Borrow Area has been utilized and reclaimed at this time. A Phase III bond release was approved by DOGM on July 19, 2016 (Task ID#5114)

Borrow area F comprises 6.7 acres and consists of the same Hernandez family of soils as borrow area A. See Appendix II-4, section 1, for a discussion of the Hernandez series. Physical and chemical analyses results from representative test pits in area F are given in Appendix II-4, Table 1.4. A volume of 42,000 cubic yards is available by excavating the 6.7 acres to a depth of 4 feet. Coal fines were noted in the top 0.2 feet of the soil in this area. Areas containing coal fines will be removed and disposed of in the slurry ponds before the remaining substitute topsoil is recovered.

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It is important to note that these volumes indicate the materials that are available on the surface and that the best available material from regrading and reclamation activities of the entire pad area will be temporarily stockpiled until the regrading and reclamation activities are complete. The salvaged materials will then be distributed to achieve a six inch cover according to the reclamation plan for South Fork. Once reclamation starts it will be a continuous operation and will be completed during one growing season. Because the substitute topsoil stockpile will be added to on a continuous basis during regrading and reclamation it is impractical to try to vegetate the topsoil stockpile. The stockpiles will be protected from erosion by diverting channel flows away from the stockpile. Designs for these channels will be submitted to the Division for approval prior to stockpiling activities.

Based on the results of analyses of the soil samples collected in the South Fork area, soils in the area are low in organic matter, nitrogen, phosphorus and potassium (see Appendix II-4, Table 2.1).

Soil amendments which will be required to make the pad soils more suitable for revegetation are provided in Table 2.3 (Appendix II-4).

The coal stockpile area and truck loadout will be reclaimed with topsoil salvaged during construction. The salvaged topsoil has been stockpiled and protected. It is located in the area designated on Exhibit II-4A as the South Fork topsoil stockpile area. The total volume available from these piles are 1,206 cubic yards.

North Fork Area

North Fork Substitute Topsoil

An intake ventilation portal for the King IV mine was constructed in the North Fork area in 1979-80. The disturbed area comprises 1.5 acres (see Exhibit II-4D). Topsoil was salvaged during construction and redistributed on the regraded slopes near the portal. No further topsoiling is required at this site. Table II-12 summarizes the available substitute topsoil volumes for the minesite. The North Fork area is reclaimed and Phase III bond release was approved by DOGM on July 19, 2016 (Task ID# 5114).

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Topsoil Stockpile East of Slurry Pond No. 4

This stockpile is shown on Exhibit II-4A. It was created in 1988 when Refuse Pile No. 2 was extended north and east of Slurry Pond No. 4. The dimensions of the pile are 130 feet long by 60 feet wide and 6 feet high. The minimum slope of this pile is 0, the top is flat. The maximum slope is 37 degrees. The stockpile contains approximately 1,488 cubic yards of topsoil. The pile has been revegetated with seed mix No. 1 (less shrubs) described in Table III-3 of Chapter III. Prior to placement of the topsoil the existing vegetation was removed and the surface scarified. The new material was then placed with sufficient compaction to ensure long term stability while not creating a deleterious condition to plant root growth. The stockpile is protected by a surrounding berm-ditch structure. This stockpile was utilized on slurry pond #4.

Topsoil Stockpile East of Slurry Pond No. 5

This stockpile was created when the toe of Slurry Pond No. 5 was extended eastward in 1983. The topsoil, located within the bounds of the defined disturbed area and shown on Exhibit II-4A, is protected from erosion by both a primary runoff control diversion which is constructed around the topsoil pile and a diversion ditch further to the west which will intercept all flow from upstream runoff. The pile contained 1,028 cubic yards of topsoil. The pile was revegetated with an approved seed mix on hand at that time. In 2016, the pile was used to reclaim this area in conjunction with Sediment Pond 7 reclamation.

Topsoil Stockpile West of Equipment Storage Yard

Topsoil in this pile was salvaged prior to construction of the equipment storage yard. It consisted of the upper 6 inches of material removed from the area of the yard. The topsoil was stockpiled in a long low berm immediately west of the yard. It measured 515 feet long, 50 feet wide and had an average height of 4.7 feet giving a total volume of 4,480 cubic yards. The top was flat. The maximum side slope was 27 degrees. The stockpile was located on a relatively flat slope (less than 8 percent). It was emplaced with sufficient compaction to ensure stability but still allow the growth of vegetation. It was protected from erosion by a surrounding containment ditch. This stockpile was gouged, fertilized, reseeded and mulched in April, 1992. The seed mix was seed mix No. 2 described in Table III-4 of Chapter III. This stockpile was utilized on Slurry Pond #5 Main Cell in 1997.

Future reseeding of the stockpiles will be done using seed mix No. 2, excluding shrubs or an approved interim seed mix. The seeds will be hand broadcast using the rates given in Table III-4 of Chapter III. The proposed seed mixture contains legumes for nitrogen fixation, and forbs and grasses for soil stabilization. Regulations permit soil stockpiles in Utah to be stabilized with a single plant species or even none if some other method of soil stabilization and protection is used such as a straw mulch tied down by a nylon net. Any topsoil stockpiles which do not have adequate cover will be revegetated by roughening the surface, reseeding, fertilizing and mulching so as to provide cover equivalent to the reference area for that location.

Table II-12 Topsoil and Topsoil Borrow Volumes

Topsoil Stockpiles	Acreage	Depth (ft)	Volume (yds) Available	Volume (yds) Used
Hiawatha Area				
East of Slurry Pond No. 4	N/A	N/A		1,488
East of Slurry Pond No. 5	N/A	N/A		1,028
West of Equipment Storage Yard				4,480
Middle Fork Area				
Middle Fork Stockpile	N/A	N/A	354	
South Fork Area				
South Fork Stockpile	N/A	N/A	1,206	
Total			1,560	6,996
Topsoil Borrow Areas				
Hiawatha Area				
Borrow Area "A"	16.87	7.0	75,697	114,594
Borrow Area "F"	6.7	4.0		42,000
Lower Preparation Plant Borrow Area	3.93	3.33	24,300 ¹	
Upper Rail Storage Yard Borrow Area	6.30	6 avg	75,543 ¹	
Middle Fork Area				
Substitute Topsoil Site "A"	2.55	1.5	6,169	
Substitute Topsoil Site "B"	0.66	1.5	1,596	
Substitute Topsoil Site "C"	1.18	1.5	2,855	
South Fork Area				
Substitute Topsoil Site "A"	1.49	1.5	3,605	
Substitute Topsoil Site "B"	1.13	1.5	2,734	
Total			192,499	156,594
Additional Potential Topsoil Borrow Areas				
Borrow Area "B"	12.35	4.5	89,661	
Borrow Area "C"	8.85	4.5	64,251	
Borrow Area "D"	10.2	1.83	30,114	
Borrow Area "E"	6.6	5.0	53,000	
Ridge Area	0.9	0-24	12,300 ¹	

¹See Appendix II-4, Section 3, for volume calculations.

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North Fork Area Reclamation

The North Fork ventilation portal and stream diversion (Exhibit II-4D) contains 1.5 acres (See Table II-13, RA-26, 27). The ventilation portal (1.0 acres) was reclaimed using in situ soils northeast of the portal. The 0.5 acre area containing the stream diversion and pipeline to the King 2 mine portal was also reclaimed using the in situ soils. The North Fork area is reclaimed and Phase III bond release was approved by DOGM on July 19, 2016 (Task ID# 5114).

Middle Fork Area Reclamation

The Middle Fork mine yard, loadout facility and sediment pond, as delineated on Exhibit II-4C, contains a total disturbed area of 11.8 acres. The storage areas adjacent to the Middle Fork haul road comprises and additional 3 acres. Reclamation area RA-23 (sediment pond) will use the material in the pond bank for reclamation. The area between the bath house and water tank and the area west of the King 5 mine portals (RA-24) will be reclaimed using in situ material. The 3 acre storage areas (RA-25) will also be reclaimed using in situ material. The remaining 9.4 acres (RA-22) will be reclaimed with material from Middle Fork substitute topsoil areas A, B, and C.

South Fork Area Reclamation

The South Fork mine yard, conveyor corridor, truck loadout and sediment ponds, as delineated on Exhibit II-4B, contain a total disturbed area of 12.6 acres, excluding the haul road. The 0.6 acre area between the bath house and water tank (RA-20) will be reclaimed utilizing in situ soils. Little, if any, regrading will be required in this area. The 1.87 acre area comprising sediment pond D009 and sediment pond D011 (RA-21) will utilize soil material in the pond embankments. The 6.41 acre mine yard and bath house area (RA-19) will be reclaimed with material from the South Fork substitute topsoil areas A and B. The 1.84 acre conveyor corridor will utilize in situ soil materials contained in its embankment. The 1.94 acre coal stockpile and truck loadout area will be reclaimed with topsoil from the South Fork topsoil stockpile at the mouth of the canyon. A strip of land bounded by the conveyor, the coal stockpile and the haul road (approximately 1 acre) has received interim revegetation and will require only minor reclamation. The South Fork haul road occupies approximately 1.93 acres within the South Fork disturbed area. See Appendix II-3 for a discussion of the soil materials available in the vicinity of the conveyor corridor and truck loadout area.

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Hiawatha Area Reclamation

There was originally a total of 221.36 disturbed area acres within the lower Hiawatha area, excluding the canyon roads. Unfortunately, due to the age of the facilities, there has been very little topsoil or fill material salvaged and stockpiled for reclamation from these areas. Table II-13 shows the acreage by area. Exhibit II-4A shows the locations of the areas. Some of the area has already been reclaimed since it is no longer needed. On July 19, 2016 DOGM approved Phase III bond release on 76.5 acres in this area (Task ID #5114). On July 12, 2017 DOGM approved Phase III bond release on 10.17 acres (Task ID #5300). The current disturbed acreage in this area is 134.69 acres.

The following is a summary of the status of areas which are currently reclaimed at this site as of 2017:

	Area	Total Acres	Reclaimed Acres	Topsoiled Acres	Remaining
RA-5	Slurry Pond 4 / Refuse Pile 2	26.37	26.37	26.37	-0-
RA-1	Affected Areas	29.11	19.83	-0-	9.28
RA-7	Preparation Plant Area	23.87	5.51	-0-	18.36
RA-6	Borrow Area "F"	9.12	9.12	-0-	-0-
RA-2	Slurry Pond 5 Main Cell	40.39	40.39	40.39	-0-
RA-4	Borrow Area "A"	16.87	5.28	-0-	11.59
Total		145.73	106.5	66.76	39.23

A complete description of all of the disturbed areas, acreage and topsoil volumes is found in Table II-13.

Slurry Pond "4" has been completely reclaimed. The area on the northeast corner (approx. 1 acre) required recontouring and topsoiling. The topsoil pile East of Slurry Pond No. 4 was used to reclaim this area. An additional 577 yards of substitute material was needed to complete Pond 4, which came from Borrow Area "A". The affected areas were reclaimed by vacuuming coal fines and/or topsoiling the areas. Areas being topsoiled were ripped to a depth of 18" to 24" before topsoil was placed.

The main cell of slurry pond 5 has been completely reclaimed. The reclamation was completed in 1999. An affected area 1.91 acres in size exists West of Slurry Pond "5". Portions of this area may require additional topsoil, which will come from Borrow Area "A". Following topsoiling activities in 1998, Borrow Area "A" was surveyed for remaining volumes (completed 6-6-08). Any areas in Borrow Area "A" which have reached the maximum depth of substitute topsoil were ripped and seeded with the seed mix No. 1 (Table III-6). The remaining areas were seeded with an interim seed mix as described in R645-301-331. Approximately 5.28 acres of borrow area "A" have been reclaimed. The remaining acreage will be used to reclaim slurry pond 5A. Areas that have received bond release are shown on Exhibit II-4A

Non-Refuse Areas

Approximately 5.51 acres of the preparation plant area have been reclaimed at this time. The remainder of the preparation plant area and affected non-refuse areas will be reclaimed utilizing in-site soils. Where greater than 50% coal (visual estimation) or other contaminants (oil, grease, etc.) are present on the surface, this material will be removed and taken to a Slurry Pond for final burial. The remaining in situ soils will then be graded and prepared for seeding according to the plan.

since the original bond was established. Through the years, the reclamation bonding requirement was increased when new facilities were approved, but no adjustments were made when facilities were removed. To rectify this flaw the Division approved U. S. Fuel's request to adjust the reclamation bond on February 13, 1995. However, the bond calculation still includes some additional facilities which may no longer exist and are not mentioned in this discussion. These facilities will be removed from the bond calculation after completion of regrading for Phase I bond release or as a result of another bond adjustment. The bond calculations can be found in Chapter 8, Appendix 8-4.

NORTH FORK SURFACE FACILITIES

During 1981, a portal was constructed in the North Fork drainage to provide the King 4 mine with intake ventilation. The plan for the construction of this facility is included in Appendix 5-7 of this chapter. Originally, the plan called for return ventilation warranting the construction of a fan and powerline. However, the area was not developed with power so the portal provided an additional intake airway for the mine. Exhibit 5-4 shows the disturbed area, approximately one and a half acres, for the portal facility. A three mile jeep road from Hiawatha to the ventilation portal is the only access. This site is classified as an alternative sediment control area (see Appendix 5-8). Sediment control is provided as specified in Appendix 5-7. The portal is constructed of 14 foot diameter arched steel beams on 4 foot centers covered with 8 gauge preformed liner plates. The portal has been sealed and the area regraded and reseeded. No future disturbance is proposed for this site. ANR Company intends to extend the jeep trail beyond the portal area as part of timbering, recreation and wildlife post-mining land uses, as described in R645-301-412. Phase III bond release on this area was approved by DOGM on July 19, 2016 (Task ID# 5114).

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Bonding Calculations

Direct Costs

Subtotal Demolition and Removal	\$341,691.00
Subtotal Backfilling and Grading	\$471,808.00
Subtotal Revegetation	\$328,902.00
Direct Costs	\$1,142,401.00

Indirect Costs

Mob/Demob	\$114,240.00	10.0%
Contingency	\$57,120.00	5.0%
Engineering Redesign	\$28,560.00	2.5%
Main Office Expense	\$77,683.00	6.8%
Project Management Fee	\$28,560.00	2.5%
Subtotal Indirect Costs	\$306,163.00	26.8%

Total Cost in 2014 Dollars	\$1,448,564.00
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Escalation factor		0.019
Number of years		5
Escalation	\$142,943.00	
Reclamation Cost Escalated	\$1,591,507.00	

Bond Amount (rounded to nearest \$1,000) 2019 Dollars	\$1,592,000
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Posted Bond 2016	\$1,708,000.00
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Difference Between Cost Estimate and Bond Percent Difference	\$116,000 7.29%
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Earthwork Cost Calculation Tables

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Backfill and Grade South Fork 001															17727
Topsoil South Fork 003															6975
Stream South Fork 004															12499
Backfill Middle Fork 005															30069
Timber Yard Middle Fork 006															3360
Topsoil Middle Fork 008															4300
Backfill Prep Plant 009															124093
Topsoil Prep Plant 011															135554
Topsoil Borrow Area 012															0
Support 013															102377
Middle Fork Stream 014															34854
Total															471808

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Earthwork Cost Calculation Tables

Adjusted after 2008 bond release	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Topsoil Prep Plant 011															
Waste Removal Nonrefuse Areas															
Cut and Fill Sites															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561 \$/HR		28177 cy		2322 cy/hr		12.1	HR	6788
Ripping (nonrefuse areas)															
RA-1 Pond/Misc. Areas	See Table II-13								8.19 ac						
RA-1 Pond D007									1.09 ac						
RA-4 Borrow Area A	See Table II-13								11.59 ac						
RA-8 Warehouse/Equipment Yard	See Table II-13								2.87 ac						
RA-11 Ridge Borrow Area (Non-refuse only)	See Table II-13								0.9 ac						
RA-13 Upper Rail Storage Yard (except borrow Area)	See Table II-13 and Exhibit 2-4A								2.84 ac						
RA-14 Truck Shop Yard	See Table II-13								2.01 ac						
RA-15 Runaway Truck Lane	See Table II-13								1.51 ac						
DD2 and DD3	See Exhibit 2-4A								0.91 ac						
Total non-Refuse Acres									31.91 ac						
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323 \$/HR		31.91 ac		1.56 ac/hr		20	HR	6460
Multi-Shank Ripper 360-519 P (9-58) (2nd2007)	3065	9.35	0.1		29.4	1	29 \$/HR		31.91 ac		1.56 ac/hr		20	HR	580
Topsoil Recover (borrow area)															
RA-4 Borrow Area A	See Table II-13								11.59 ac						
RA-11 Ridge Borrow Area (Non-refuse only)	See Table II-13								0.9 ac						
RA-13 Upper Rail Storage Yard (borrow area only)	See Exhibit 2-4A								6.3 ac						
Lower Preplant Borrow Area	See Exhibit 2-4A								3.72 ac						
Total Borrow Area Acres									22.51 ac						
remove and stockpile 12 inch topsoil from borrow area (see page 2-41)									12 in						
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561 \$/HR		36316 cy		2322 cy/hr		16	HR	8976
Haul 16 in Topsoil from Borrow Area A to Pond 5A															
RA-3 Slurry Pond 5 Cell 5A	See Table II-13								16 in						
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323 \$/HR		15.59 ac		1.56 ac/hr		7.4	HR	2390
Multi-Shank Ripper 360-519 P (9-58) (2nd2007)	3065	9.35	0.1		29.4	1	29 \$/HR		11.59 ac		1.56 ac/hr		7.4	HR	215
631G (9-49) (2nd2007)	16500	121.8	0.1	50.25	287.4	4	1150 \$/HR		33.536 cy		1512 cy/hr		22	HR	25300
Haul 16 in Topsoil from Borrow Area at Prep Plant to RA-9 Refuse Pile 1 and RA-8 Warehouse/Equip															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323 \$/HR		16 in		1.56 ac/hr		2.4	HR	775
Multi-Shank Ripper 360-519 P (9-58) (2nd2007)	3065	9.35	0.1		29.4	1	29 \$/HR		20.38 ac		1.56 ac/hr		2.4	HR	70
631G (9-49) (2nd2007)	16500	121.8	0.1	50.25	287.4	4	1150 \$/HR		3.72 ac		2384 cy/hr		18	HR	20700
Haul 16 in from Upper Rail Yard to Pond 1 RA10, RA11 (refuse) and RA12															
D9R Semi-U EROPS (9-52) (2H2007)	19900	135.65	0.1	48.9	322.5	1	323 \$/HR		16 in		1.56 ac/hr		4	HR	1292
Multi-Shank Ripper 360-519 P (9-58) (2nd2007)	3065	9.35	0.1		29.4	1	29 \$/HR		27.69 ac		1.56 ac/hr		4	HR	116
631G (9-49) (2nd2007)	16500	121.8	0.1	50.25	287.4	4	1150 \$/HR		6.3 ac		1460 cy/hr		41	HR	47150
Replace topsoil recovered from borrow areas															
D11R U EROPS (9-52) (2nd 2007)	35900	261.35	0.1	48.9	560.8	1	561 \$/HR		36316 cy		2322 cy/hr		16	HR	8976
Spread/Place topsoil to grade stakes (3 passes) (refuse areas)															
RA-3 Slurry Pond 5 Cell 5A	See Table II-13								15.51 ac						
RA-9 Refuse Pile 1	See Table II-13								17.51 ac						
RA-10 Slurry Pond 1	See Table II-13								19.39 ac						
RA-11 Refuse Area	See Table II-13								1.92 ac						
RA-12 RR Track West of Shop	See Table II-13 and Exhibit 2-4A								6.38 ac						
Total Refuse Area Acres									60.71 ac						
14H EROPS (9/11)(2H2007)	9050	64.65	0.1	50.25	177.9	1	178 \$/HR		60.71 ac		5.6 ac/hr		10.8	HR	1922
14H EROPS (9-11)(2H2007)	9050	64.65	0.1	50.25	177.9	1	178 \$/HR		60.71 ac		5.6 ac/hr		10.8	HR	1922
14H EROPS (9/11)(2H2007)	9050	64.65	0.1	50.25	177.9	1	178 \$/HR		60.71 ac		5.6 ac/hr		10.8	HR	1922
Subtotal															135554

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Revegetation Cost Calculation Tables

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	South Fork Veg 001																			26664
	Middle Fork Veg 002																			72814
	Prep Plant Veg 004																			180159
	Topsoil Borrow 005																			49265
	Total																			328902

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Revegetation Cost Calculation Tables

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
	Prep Plant Veg 004																				
	RA-1 Sed. Ponds/Misc. Areas	See Table II-13 (pg 2-42)	D006 = 5.34 acre, D004 = 1.65acre, D003 = 1.2 acre							8.19						AC					
	RA-1 Sed. Pond D07		D007 = 1.09 acre							1.09											
	Ditches DD2 and DD3	See Exhibit 2-4A	DD2 = 0.27 acre, DD3 = 0.64 acre							0.91											
	RA-1 Misc. Areas	See Exhibit 2-4A	W of Stry Pnd 5 = 2.1, S of Stry Pnd 4 = 1.83, E of Track = 1.9, Rd to Pnd D003 = 1							6.83						AC					
	RA-1 Misc. Areas	See Exhibit 2-4A	N of Sed Pnd 4 = 2.17, btwn MF/SF Rd = 0.98, btwn MF/NF road = 3.15							6.3						AC					
	RA-3 Slurry Ponda 5 Cell 5A	See Table II-13 (pg 2-42)								15.51						AC					
	RA-8 Warehouse/Equipment Yard	See Table II-13 (pg 2-42)								2.87						AC					
	RA-9 Refuse Pile 1	See Table II-13 (pg 2-42)								17.51						AC					
	RA-10 Slurry Pond 1	See Table II-13 (pg 2-42)								19.39						AC					
	RA-12 RR Track West of Shop	See Table II-13 (pg 2-42)								6.38						AC					
	RA-13 Upper Rail Storage Yard	See Table II-13 (pg 2-42) and Exhibit 2-4A	9.14 acres - Borrow Area* (6.3 acres) (*see borrow area worksheet)							2.84						AC					
	RA-14 Truck Shop yard	See Table II-13 (pg 2-42)								2.01						AC					
	RA-15 Runaway Truck Ramp	See Table II-13 (pg 2-42)								1.51						AC					
	Total Acreage									91.34						AC					
	Scarify total area to be reclaimed	75 HP Dozerw/scarifiers	32 91 13 23 3100	4.24 /MSF						91.34						AC		3979	MSF	16871	
	Apply Fertilizer	Fertilizer Tractor Spread	32 01 90 13 0130	3.54 /MSF						91.34						AC		3979	MSF	14086	
	Disc harrow along contour	300 H. P. (D8) Eq. Op., Medium Equipment (Eqmd)	01 54 33 20 4310 Eq. Op. Med.	1817 /day 61.72 /HR										15.5 15.5		HR HR		1.9 Day 1.9 Day		3452 117	
	Drill Seeding	Tractor Spreader (equip. & labor) B-66 Ponds, Refuse Area	SRCE HiawathaVeg002	15 /AC 855 /AC						84.34 84.34						AC AC		84.34 84.34	AC AC	1265 72111	
	Mulch 2 tons per acre	Hay bale	Reveg007	170 /ton						84.34						AC		168.7	tons	28679	
	Hydroseed steep areas	Hydro Spreader (equip. & labor) B-81 Ponds, Refuse Area	Reveg005 HiawathaVeg002	223 /AC 855 /AC						7 7						AC AC		7 7	AC AC	1561 5985	
	Subtotal																				144127
	Reveg Assume 25% reseeding																				36032
	Subtotal																				36032
	Total																				180159

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Revegetation Cost Calculation Tables

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Topsoil Borrow 005																			
	RA-4 Borrow Area A	See Table II-13 (pg 2-42)								11.59						AC				
	RA-11 Ridge Borrow Area	See Table II-13 (pg 2-42)	(Refuse and non-refuse areas)							2.82						AC				
	Lower Prep Plant Borrow Area	See Exhibit 2-4A								3.72						AC				
	Upper Rail Yard Borrow Area	See Exhibit 2-4A and Table II-13								6.3						AC				
	Total Borrow Area Acres									24.43						AC				
	Scarify total area to be reclaimed	75 HP Dozerw/scarifiers	32 91 13 23 3100	4.24/MSF						24.43						AC		1064 MSF		4511
	Apply Fertilizer	Fertilizer Tractor Spread	32 01 90 13 0130	3.54/MSF						24.43						AC		1064 MSF		3767
	Disc harrow along contour	300 H. P. (D8) Eq. Op., Medium Equipment (Eqmd)	01 54 33 20 4310 Eq. Op. Med.	1817 /day 61.72 /HR										5.2 5.2		HR HR		0.7 Day 5.2 HR		1272 321
	Drill Seeding	Tractor Spreader (equip. & labor) B-66 Ponds, Refuse Area	SRCE HiawathaVeg002	15 /AC 855 /AC						24.43 24.43						AC AC		24.4 AC 24.4 AC		366 20862
	Mulch	Hay bale	Reveg007	170 /ton						24.43						AC		48.9 tons		8313
	Subtotal																			183542
	Reveg Assume 25% reseeding																			9853
	Subtotal																			193395
	Total																			49265

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R645-301-840 GENERAL TERMS AND CONDITIONS OF THE BOND

The general terms and conditions of the bonds can be determined by review of copies of the bond documents contained in Appendix VIII-2.

R645-301-850 BONDING REQUIREMENTS

See bonding documents in Appendix VIII-2.

R645-301-860 FORMS OF BONDS

Hiawatha Coal Company is currently bonded in the amount of \$2,128,000 in the form of a US Treasury Note with the Division of Oil Gas and Mining held in escrow by the Bank of Utah.

R645-301-870 REPLACEMENT OF BONDS

No response required by applicant.

R645-301-880 BOND RELEASE APPLICATION

If a bond release is requested an application will be filed with the Division at a time appropriate for evaluation of reclamation success. Reclamation time tables are given under R645-301-240 in Chapter II (Soils). Within 30 days after an application for bond release has been filed with the Division a newspaper advertisement will be placed in a local newspaper. The advertisement will contain the permittee's name, permit number and approval date, notification of the precise location of the land affected, the number of acres, the type and amount of the bond filed and the portion sought to be released, the type and appropriate dates of reclamation work performed, a description of the results achieved as they relate to the operator's approved reclamation plan and the name and address of the Division to which written comments, objections, or requests for public hearings and informal conferences on the specific bond release may be submitted pursuant to R645-301-880.600 and R645-301-880.800. In addition, as part of any bond release application, the applicant will submit copies of letters which he or she has sent to adjoining property owners, local governmental bodies, planning agencies, sewage and water treatment authorities, and water companies in the locality in which the coal mining and reclamation operation took place, notifying them of the intention to seek release from the bond.

2008 Phase I Bond Release

Over the years there have been several structures removed, and reclamation performed. In December 2007, a Phase I bond release application was submitted to reflect this reclamation. It was approved on February 18, 2009 with a condition that \$478,833 be held back to insure vegetation of the Slurry Pond 4 and Slurry Pond 5 areas.

2016 Phase III Bond Release

Vegetation studies were performed on various areas in 2013 and 2014 (See Appendix VIII-5 and VIII-6). In December 2015 Hiawatha Coal submitted a Phase III bond release. It was for all the areas included in the vegetation study with the following exceptions.

- The two RA-1 areas West of Slurry pond 5 and 5A were part of the vegetation study but were not included in the bond release as DOGM personnel had expressed reservations about

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it being included due to the amount of coal fines in the area.

- Approximately 10.17 acres of the east slope of pond 5A was not included as reclamation of sediment pond D007 was planned for 2016 and HCC was not sure if these activities would affect the slope of the pond.

This bond release was approved on July 19, 2016 and DOGM released \$426,622 of the 2008 Phase I money held back, and left \$52,211 in place to cover the remaining 10.17 acres.

2016 Phase I and Phase III bond release

In September of 2016 pond D007 was reclaimed. This work did not impact any of the 10.17 acres of pond 5A west slope excluded from the 2015 bond release. In October of 2016 HCC submitted a bond release asking for Phase III release of the 10.17 acres of Pond 5A slope and a Phase I release of pond D007 and the ditch leading to it (1.6 acres).

This bond release was approved on July 12, 2017.

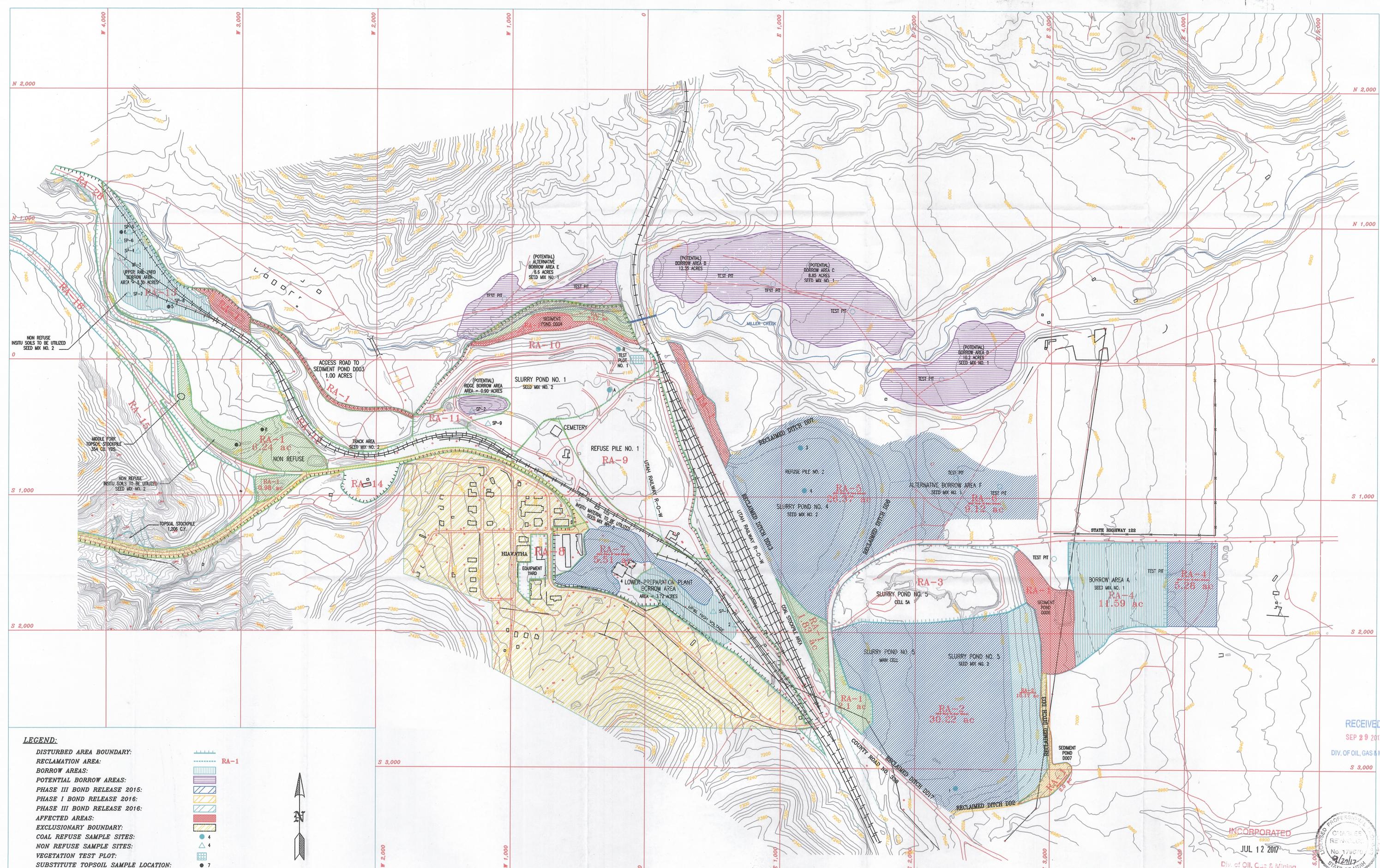
R645-301-890 TERMS AND CONDITIONS OF LIABILITY INSURANCE

A copy of Hiawatha Coal Company liability insurance certificate is given in Appendix VIII-3.

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LEGEND:

DISTURBED AREA BOUNDARY: [Symbol]

RECLAMATION AREA: RA-1 [Symbol]

BORROW AREAS: [Symbol]

POTENTIAL BORROW AREAS: [Symbol]

PHASE III BOND RELEASE 2015: [Symbol]

PHASE I BOND RELEASE 2016: [Symbol]

PHASE III BOND RELEASE 2016: [Symbol]

AFFECTED AREAS: [Symbol]

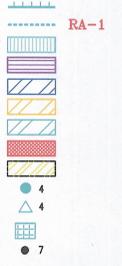
EXCLUSIONARY BOUNDARY: [Symbol]

COAL REFUSE SAMPLE SITES: [Symbol]

NON REFUSE SAMPLE SITES: [Symbol]

VEGETATION TEST PLOT: [Symbol]

SUBSTITUTE TOPSOIL SAMPLE LOCATION: [Symbol]



NOTE: WHERE RECLAMATION AREA BOUNDARIES COINCIDE WITH THE DISTURBED AREA BOUNDARIES, ONLY THE DISTURBED AREA BOUNDARIES ARE SHOWN.

REVISION DATE:

AUG 1998	July 19 2016 Bond Release
JAN 26 1999	July 12 2017 Bond Release
JUL 03 2008	
May 18 2013	

HIAWATHA COAL COMPANY
HIAWATHA, UTAH

HIAWATHA PROCESSING PLANT
AND WASTE DISPOSAL SITES

RECLAMATION SOILS
INFORMATION

EXHIBIT
II-4A

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STATE OF UTAH
No. 17907
2017
LICENSED PROFESSIONAL
CIVIL ENGINEER
RENE LUK

HIAWATHA COAL CO.

HIAWATHA, UTAH

PHASE III BOND RELEASE AREAS

SCALE:
1" = 1500'

DRAWN BY:
M. REYNOLDS

DATE:
12/21/15

HIAWATHA MINE

PLATE 8-2

2015 Bond Release Area
2016 Bond Release Area



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RECEIVED

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REV.	DATE	REMARKS	APPR.
1	10/6/16	Removed 2015 from map name, added 2016 Bond Release	07/12/17
2			
3			
4			
5			
6			
7			
8			
9			
10			

