PATHFINDER

September 19, 2007

Mr. Keith I. McConnell, Deputy Director
Decommissioning & Uranium Recovery Licensing Directorate
Division of Waste Management & Environmental Protection
Office of Federal & State Materials & Environmental Management Programs
Mail Stop T-8F5
U. S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, Maryland 20852-2738

Ref: Docket No. 40-6622, Source Material License No. SUA-442
Surety estimate for the Shirley Basin mill tailings site

Dear Mr. McConnell:

The enclosed revision of the Shirley Basin mill tailings site surety estimate is submitted in fulfillment of the requirement of Condition 27 of the referenced license.

The volumes of materials and corresponding unit costs have been broken down in this revision by different work areas, reflecting the structure of the existing contract under which most of the tailings reclamation work is being done. The quantities have been updated through the end of Pathfinder's fiscal September, 2007, reflecting work accomplished since the previous estimate (September, 2006).

Pathfinder requests an amendment to the referenced license to incorporate the revised surety amount as required by condition 27. A summary of the adjusted surety amount is shown below.

SHIRLEY BASIN SITE

ACTIVITY	CURRENT SURETY	PROPOSED SURETY
1. Mill Decommissioning	$0	$0
2. Tailings Reclamation	2,533,138	1,221,598
3. Long Term Surveillance	752,954	767,725
SUBTOTAL	$3,286,092	$1,989,323
4. Contingency (15%of 1 & 2)	379,971	183,240
TOTAL	**$3,666,063**	**$2,172,563**
Increase/(Decrease)		($1,493,500)

PATHFINDER Mines Corporation
935 Pendell Blvd., P.O. Box 730, Mills, WY 82644 - Tel. : (307) 234-5019 - Fax : (307) 473-7306

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The decrease to $1,493,500 in the proposed surety amount reflects a recalculation of the cost estimate based upon the approved revised reclamation plan, revised estimates of the various volumes, credit for work done through September of 2007, and unit costs based upon the actual contract in place to do the work.

The long term surveillance fee has been increased, consistent with the latest available CPI adjustment (August, 2007). Supporting information for the recalculated surety estimate is enclosed (two copies). Upon your written approval, we will proceed to obtain a rider for the existing Letter-of-Credit to reflect the revised surety amount.

Sincerely,

Tom Hardgrove

Tom Hardgrove
Operations Manager

Enclosures

Cc: D. B. Spitzberg, USNRC Region IV
B. Bonifas, PMC

Pathfinder Mines Corporation
Shirley Basin Mine
Tailings and Mill Site Reclamation Cost Estimate
September 19, 2007

ACTIVITY	QUANTITY	UNIT COST ($)	COST ($)
Regrading and Channels Excavation:			
Localized Cut/Fill-			
Pond #4	0 CY	1.90	0
Pond #5	0 CY	1.90	0
Pond #5 Dam	0 CY	2.62	0
West Pond #4	0 CY	1.40	0
Evap. Ponds	0 CY	1.40	0
Mill Site & Ore Pad	0 CY	1.40	0
West Channel & Related	0 CY	1.75	0
Pond #3 & Adjacent Area	19,605 CY	2.62	51,365
Imported Fill-			
Pond #4	0	2.80	0
Pond #5	0 CY	2.80	0
Pond #5 Dam	0 CY	2.80	0
West Pond #4	0 CY	2.80	0
Evap. Ponds	0 CY	2.80	0
Mill Site & Ore Pad	0 CY	2.80	0
Pond #3 & Adjacent Area	28,750 CY	2.80	80,500
Clay Radon Barrier Placement:			
Pond #4	0 CY	3.12	0
Pond #5	0 CY	3.56	0
West Pond #4	0 CY	3.12	0
Evap. Ponds	0 CY	3.84	0
Mill Site & Ore Pad	0 CY	1.92	0
Pond #3 & Adjacent Area	36,952 CY	3.56	131,549
Sand Layer:			
Pond #4	0 CY	3.34	0
Pond #5	0 CY	3.34	0
West Pond #4	0 CY	3.56	0
Evap. Ponds	0 CY	3.70	0
Mill Site & Ore Pad	0 CY	2.00	0
Pond #3 & Adjacent Area	18,476 CY	3.56	65,775
Rip Rap, Rock Mulch, and Filter Bed:			
Rip Rap (1.2') Purchase	0 tons	16.02	0
Rip Rap (0.8') Purchase	4,250 tons	27.00	114,750
Rip Rap (0.4') Purchase	1,400 tons	25.00	35,000
Rock Mulch (1.5" & 2.5") Purchase	0 tons	13.52	0
Filter Bed (<1.0") Purchase	0 tons	11.02	0
Large Rip Rap (1.2') Placement	590 tons	8.80	5,192
Small Rip Rap (0.8') Placement	4,250 tons	7.70	32,725
Small Rip Rap (0.4') Placement	1,400 tons	6.60	9,240
Rock Mulch Placement	0 tons	6.49	0
Filter Bed Placement	2,390 tons	5.50	13,145
Topsoil Placement:			
Pond #4	0 CY	2.20	0
Pond #5	0 CY	2.91	0
West Pond #4	0 CY	3.24	0
Evap. Ponds	0 CY	3.28	0
Mill Site & Ore Pad	0 CY	2.91	0
West Channel & Related	0 CY	3.28	0
Pond #3 & Adjacent Area	24,551 CY	3.28	80,527
Fuel Cost Adjustment:			12,000
Revegetation:	25 AC	168.60	4,215
SUBTOTAL			635,983
Construction Management	—	Lump Sum	166,900
Engineering Design/Plan Changes	—	Lump Sum	6,600
Mobilization/Demobilization	—	Lump Sum	125,000
Legal Expenses	—	Lump Sum	10,000
Power	—	Lump Sum	1,200
Completion Report Preparation	—	Lump Sum	12,700
License Termination Activities	—	Lump Sum	28,700
Materials Testing	—	Lump Sum	18,000
Groundwater Restoration	—	Lump Sum	22,539
Solution Evaporation	—	Lump Sum	0
Fencing	—	Lump Sum	55,000
Radiological Surveys	—	Lump Sum	25,000
Environmental Monitoring	—	Lump Sum	113,976
		TOTAL	1,221,598
		Contingency (15%)	183,240
		Site Surveillance	767,725
		GRAND TOTAL	$2,172,563

Shirley Basin Mill Tailings Site
Reclamation Cost Estimate
September 19, 2007

Materials Unit Rates and Equipment Hourly Costs

For tailings-related reclamation work that will be completed by the end of 2007 materials unit costs and equipment hourly rates utilized in this bond calculation are from the signed contract between Pathfinder and Carr Construction Company, Inc. (Carr). See the attached Exhibit "B" for the various materials unit costs, and Exhibit D for the equipment hourly rates as specified in the current PMC/Carr contract. Note that the Carr hourly equipment rates include an operator.

Work designated as "Pond #3 & Adjacent Area" on page 1 of this surety estimate represents the second phase of the reclamation project, encompassing the ISL waste disposal site, adjacent ground needed for access, and related drainage features, that cannot be reclaimed until the ISL disposal is finished. The unit costs for these features are based upon the highest comparable cposts from the Carr contract. Those costs are appropriate for the coming surety period (2008).

Labor Costs

The labor rates for earth moving contractor help utilized in this calculation are also based upon the quoted rates as presented in Exhibit "D". The other labor rate utilized in this bonding calculation is $27.65 per hour, based on Pathfinder's 2007 labor rate with a five percent escalation for 2008, and an additional thirty-five percent for burden (benefits, unemployment insurance, social security, etc.). Based on Pathfinder's 2007 experience, it appears that $27.65 per hour is appropriate for the non-earth moving activities.

Quantities of Materials

The quantities of materials presented in Table 1 are the latest revised figures for the remaining tailings reclamation work at Shirley Basin. They have been updated by adjusting for work projected to be accomplished through the end of September, 2007. They represent the actual quantities of material yet to be placed in order to complete the project. Excepting the aforementioned Pond 3 and related areas, as of the end of September, 2007, all tailings/milsite related grading, radon barrier clay placement, sand layer placement, topsoil placement, and most of the rock placement are or will be complete.

Fuel Costs

The contract for the tailings site reclamation specifies that any diesel fuel prices to the contractor above $2.28/gallon requires Pathfinder to reimburse the contractor for the incremental fuel cost. Using the 2007 construction season as a guide, incremental fuel costs have been about $4,000 per month. Utilizing an estimated one month of remaining construction activity in 2007 and an estimated two months to reclaim the Pond #3 area if that were to happen in 2008, **$12,000** has been inserted in Table 1 as a line item for added fuel charges.

Localized Cut/Fill and Imported Fill

Sculpting the Pond #3 area to create acceptable slopes and appropriate drainage basins and drainage ways (consistent with the reclamation plan) will be accomplished by grading the area and filling in low areas with above grade material or fill imported from an adjacent mine dump. The highest comparable Carr contract unit rate for the remaining cut/fill grading on Pond #3 is $2.62/CY. Imported fill for Pond #3 at the highest comparable contract cost would be $2.80/CY.

Radon Barrier Placement

Application of the radon barrier involves placement of one foot of material over the tailings. This cover system consists of a 0.5 foot thick clay cover and a 0.5 foot thick sandy capillary barrier.

The clay material is located in the Area 3 South Dump. The clay is compacted to 95% Proctor. Based on the Carr contract, the highest comparable unit cost for the remaining clay placement is $3.56/CY.

Based on the Carr contract, the highest comparable unit cost for the remaining sandy layer placement is $3.56/CY.

Rip Rap, Rock Mulch, and Filter Bed Purchase

The granite was mined from a quarry area located approximately 15 miles northeast of the project. This quarry is owned by a local rancher, and is currently operated by an independent contractor. Because of a conservative design modification of the channel adjacent to the main access road (the channel was widened at its base and extended some 200 feet at the lower end), it is necessary to purchase additional 0.8'rip rap. There is also a projected

shortfall of 0.4' rip rap that will require the purchase of additional material. The prices of the delivered rock products are estimated, based on the previous prices adjusted for inflation over the past three years. The estimated prices are $27.00/ton for the delivered 0.8' rip rap, and $25.00/ton for the delivered 0.4' rip rap.

Contract prices as reflected by Exhibit "B" for rock placement are as follows: **filter bed at $5.00/ton, rock mulch at $5.90/ton, 0.4' rip rap at $6.00/ton, 0.8' rip rap at $7.00/ton, and 1.2'rip rap at $8.00/ton.** All rock quantities in tons were derived by converting estimated volume needs to weight, utilizing an average density of 1.37 tons/CY (placed rock product density with voids between rocks included in the volume). Rock products placement in the final construction phase are projected at the same rates with a ten percent inflation escalation.

Topsoil Placement

Based on the Carr contract, the unit cost for the remaining **topsoil placement** in Pond #3 at the highest comparable rate is **$3.28/CY.**

Re-vegetation

Unit costs for the purchase of seed and the planting of the seed are based on vendor/contractor quotes provided to Pathfinder in August, 2007 for work to be accomplished in October, 2007.

Discing and Seeding:	
Labor and equipment -	$ 75.00/AC
Seed -	93.60/AC
Total	**$168.60/AC**

Construction Management and Miscellaneous Expenses

There are an estimated three months (fall, 2007 and 2008) of construction activity left for the project, including the ISL disposal area (Pond #3). Construction management would entail an onsite engineer and a survey support team. An onsite engineer on a consulting basis would cost $80/hr at prevailing rates in the area. The remaining construction covers 60 work days. The engineer would have a dedicated vehicle.

$80/hr x 10 hrs./day x 60 days = $48,000.

Vehicle @ $60/day x 60 days = $3,600.

A survey crew will consists of two technicians, one GPS unit, and one vehicle (based on the work plan utilized in 2007). Using the standard rate schedule (2007) from the contractor presently providing surveying services at Shirley Basin, the following cost for survey services is derived:

2 technicians x $80/hr/tech. x 10hr/day x 60 days = $96,000.

1 GPS unit @ $250/day x 60 days = $15,000.

1 Vehicle @ $60/day x 60 days = $3,600.

Survey supplies, consisting of stakes, paint, markers, etc. will cost $700 for the duration of the project.

Total construction management cost is summarized as follows:

$48,000 + $3,600 + $96,000 + $15,000 + $3,600 + $700 = **$166,900.**

Other miscellaneous expenses consist of the following:

1) Engineering design/plan changes - An estimated 20 hours of consulting engineering time would be devoted each month to plan modifications and general engineering support. Using prevailing rates for this area:

   Engineer @ $85/hr x 20 hrs./mo. x 3 mos. = $5,100.
   Clerical/drafting aide @ $50/hr. x 10 hrs./mo. x 3 mos. = $1,500.
   Total Design Cost = $5,100 + $1,500 = **$6,600.**

2) Mobilization - Carr, the current project contractor, will receive a demobilization fee of **$50,000.** The mobilization charge for Carr has already been paid. A subsequent mobilization/demobilization for a contractor to reclaim the Pond #3 area is estimated at **$75,000** due to a more limited scale project entailing less heavy equipment.

3) Legal expenses - An estimated **$10,000** is applied to this activity, exclusive of license termination activities discussed below.

4) Power - Power needs will consist of electricity to service the office. Historically, that has been about $400/month.

Total power cost would be:

$400/mo. x 3 mos. = **$1,200.**

5) Completion report preparation - It is estimated that approximately 160 hours of consultant time would be required to assemble the completion report. At typical engineering consultant rates, the following cost is derived:

120 hrs. engineering work @ $85/hr. =	$10,200
40 hrs. clerical/drafting work @ $50/hr. =	2,000
Materials -	500
Total	**$12,700**

6) License termination activities - The cost to terminate the NRC license and transfer the site to DOE is estimated as follows:

Site final survey, survey caps, sign & monument -	$6,500
Legal expenses -	5,000
Labor - 200 hrs. @ $76/hr. -	15,200
Miscellaneous -	2,000
Total	**$28,700**

Materials Testing Costs:

Based on Pathfinder's materials testing expenses during 2007, average materials testing cost for the project for the remaining three months will be $6,000/month. Using the monthly costs, the remaining project materials testing cost is derived:

$6,000/mo. x 3 mos. = **$ 18,000.**

Groundwater restoration

The NRC approved ACLs for the Shirley Basin site in October, 2005. The restoration program was terminated on November 1, 2005. No further costs are assigned to the corrective action program.

Well Plugging:

To date 113 wells have been abandoned because of the ongoing tailings reclamation work (all of these wells were either completed on tailings or immediately adjacent to tailings). There are 98 remaining wells associated with the tailings/mill site or the groundwater restoration effort. Average well

depth varies for the different casing diameters. Two inch diameter wells average 24 feet below the land surface. Similarly, four inch wells average 76 feet, five inch wells average 61 feet, and six inch wells average 64 feet. Plugging will involve the filling of each well to five feet below the land surface with bentonite pellets. A two feet deep poured concrete plug will be installed on top of the bentonite; after excavating around the casing, the casing will be cut off three feet below the land surface. The hole will then be backfilled with soil to the land surface. A cost summary for this activity follows:

Equipment:

A Cat 416CIT tractor/backhoe/loader will be utilized to dig out the top three feet of casing below the land surface and to backfill the hole after well plugging. A pickup truck will also be required to haul materials. The cost for this equipment is $40.00/hr.

Materials:

Using average well depths and filling with bentonite to a point five feet below the land surface, the quantities of bentonite required for each well diameter size are as follows:

Well Size	Avg. Depth-5′	CF of bentonite
2″	19′	0.5
4″	71′	6.2
5″	56′	7.6
6″	59′	11.6

A 50 lb. bag of pellets cost $2.90 FOB the tailings site (Pathfinder estimate). One CF of pellets equals 70 lbs.

70 lbs/CF/50 lbs/bag x $2.90/bag = $4.06/CF bentonite.

$4.06/CF x .5 CF = $2.03 bentonite for 2" well.
$4.06/CF x 6.2 CF = $25.17 bentonite for 4″ well.
$4.06/CF x 7.6 CF = $30.86 bentonite for 5" well.
$4.06/CF x 11.6 CF = $47.10 bentonite for 6″well.

1 bag of sacked concrete will be required for each well at $8.00/bag FOB the tailings site (Pathfinder estimate).

	2" Well	4" Well	5"Well	6"Well
Bentonite Pellets	$ 2.03	$25.17	$30.86	$47.10
Sacked Concrete	8.00	8.00	8.00	8.00
Total Materials	$10.03	$33.17	$ 38.86	$ 55.10

Labor:

An operator at $32 per hour and an additional driver/laborer at $28 per hour will be required. It is assumed that each well requires two hours to plug. Therefore, labor = 2 hr./well x $60/hr = $120/well.

Total Costs for Each Size Well:

	2" Well	4" Well	5"Well	6"Well
Equipment	$ 80.00	$ 80.00	$ 80.00	$ 80.00
Materials	10.03	33.17	38.86	55.10
Labor	120.00	120.00	120.00	120.00
Total	$210.03	$233.17	$238.86	$255.10

The cost to abandon the remaining wells is:

33 -	2" wells x $210.03/well =	$	6,931
14 -	4" wells x $233.17/well =	$	3,264
41 -	5" wells x $238.86/well =	$	9,793
10 -	6"wells x $255.10/well =	$	2,551
	Total	$	22,539

Total Expense for Groundwater Restoration = **$22,539.**

Solution Evaporation

The operation of the enhanced evaporation system was terminated a couple of years ago. No contaminated solution remains on site.

Fencing

New fencing will be necessary to establish the control boundary for the property prior to transfer to the DOE. Consistent with the proposed boundary in the ACL application, some 27,500 feet of fence will be constructed. Based on recent contract fencing work done for Pathfinder, a unit cost of $2.00/linear foot of fence is appropriate, including materials and labor.

27,500 ft x $2.00/ft = **$55,000.**

Radiological Surveys

The majority of the required radiological surveys included in the final reclamation plan have been completed. Additional survey work was done during May, 2005. Remaining post reclamation gamma/Ra226 survey work will focus on the areas adjacent to the ISL waste disposal area. Based upon recent experience using a contractor indicates that such an effort, including soil sample analyses, will cost about **$25,000.**

Environmental Monitoring

It is assumed that an environmental monitoring program will be maintained through next year (assuming the Pond #3 area was reclaimed in 2008) and an additional six months thereafter. Only nine of the required 100 radon flux tests remain to be done (all in the Pond #3 area) on the tailings reclamation radon barrier.

Labor

1 technician for 40 hours per month for 21 months.
40 hrs/mo. x 21 mos. x $27.65/hr = $23,226.

Administration, general overhead, and general engineering/ consultant oversight -

Administration/overhead = $600/mo x 21 mos. = $12,600.

Engineering/consultants = $600/mo x 21 mos. = $12,600.

Materials and supplies @ $100/mo x 21 mos. = $2,100.

Analytical work

Water samples - $7,000/sample period x 9 periods	$63,000
Radon flux tests - 9 tests at $50/test	450
Total analytical work	$63,450

Total Environmental Monitoring -

$23,226 + $12,600 + $12,600 + $2,100 + $63,450 = **$113,976.**

Long Term Surveillance Fee

Inflation adjustment:

Consumer Price Index, all urban consumers -
August, 2007 = 207.9
December, 1978 = 67.7

207.9/67.7 x $250,000 = **$767,725.**

Exhibit "B"

COMPENSATION SCHEDULE

Reclamation Area	Activity	Location	Units	Invoice Quantity	Bid Price $/Unit	Invoiced Price
Mobilization			Lump Sum			$ -
Tailings Reclamation						
	Regrade - Imported					
		Surrounding Areas	Bank Cubic Yards		$ 2.80	$ -
	Regrade - Local Cut/Fill					
		Mill & Ore Pad	Bank Cubic Yards		$ 1.40	$ -
		West Pond 4	Bank Cubic Yards		$ 1.40	$ -
		Pond 4	Bank Cubic Yards		$ 1.90	$ -
		Pond 5	Bank Cubic Yards		$ 1.90	$ -
		Dam 5	Bank Cubic Yards		$ 2.62	$ -
		Evap Ponds	Bank Cubic Yards		$ 1.40	$ -
		Surrounding Areas	Bank Cubic Yards		$ 1.75	$ -
	Radon Barrier					
		Mill & Ore Pad	Bank Cubic Yards		$ 1.92	$ -
		West Pond 4	Bank Cubic Yards		$ 3.12	$ -
		Pond 4	Bank Cubic Yards		$ 3.12	$ -
		Pond 5	Bank Cubic Yards		$ 3.56	$ -
		Evap Ponds	Bank Cubic Yards		$ 3.84	$ -
	Sandy Layer					
		Mill & Ore Pad	Bank Cubic Yards		$ 2.00	$ -
		West Pond 4	Bank Cubic Yards		$ 3.56	$ -
		Pond 4	Bank Cubic Yards		$ 3.34	$ -
		Pond 5	Bank Cubic Yards		$ 3.34	$ -
		Evap Ponds	Bank Cubic Yards		$ 3.70	$ -
	Rock Placement					
		1.50in Rock Mulch	Tons		$ 5.90	$ -
		2.51in Rock Mulch	Tons		$ 5.90	$ -
		.4ft Rock	Tons		$ 6.00	$ -
		8ft Rock	Tons		$ 7.00	$ -
		1.2ft Rock	Tons		$ 8.00	$ -
		Filter Bed	Tons		$ 5.00	$ -
	Topsoil					
		Mill & Ore Pad	Bank Cubic Yards		$ 2.91	$ -
		West Pond 4	Bank Cubic Yards		$ 3.24	$ -
		Pond 4	Bank Cubic Yards		$ 2.20	$ -
		Pond 5	Bank Cubic Yards		$ 2.91	$ -
		Evap Ponds	Bank Cubic Yards		$ 3.28	$ -
		Surrounding Areas (Inside Restricted Area)	Bank Cubic Yards		$ 3.28	$ -
Mine Reclamation						
	Mine Grading	North Dump	Bank Cubic Yards		$ 1.50	$ -
		South Dump	Bank Cubic Yards		$ 1.50	$ -
		Shop	Bank Cubic Yards		$ 1.70	$ -
	Topsoil	North Dump	Bank Cubic Yards		$ 2.00	$ -
		South Dump	Bank Cubic Yards		$ 1.50	$ -
		Shop	Bank Cubic Yards		$ 1.50	$ -
		Mine Roads	Bank Cubic Yards		$ 2.00	$ -
		Surrounding Areas (Outside Restricted Area)	Bank Cubic Yards		$ 2.00	$ -
		SE Area 7 Dump	Bank Cubic Yards		$ 1.50	$ -
			Lump Sum			$ -
Demobilization						$ -
Total Invoiced Price						

construction company, inc.

Dan Carr - Owner

P.O. Box 1490 Casper, Wyoming 82602 Bus. (307) 237-1013 FAX (307) 266-4223 Home (307) 235-6213

CARR CONSTRUCTION COMPANYEQUIPMENT RATE LIST 2006

EXHIBIT D

DESCRIPTION		RATE PER HOUR
CAT 621E	SCRAPER	$165.00
CAT 627E	SCRAPER/AUGER	$185.00
CAT 627E & 627F	SCRAPER	$190.00
CAT D6H	LPG DOZER	$115.00
CAT D8N	DOZER	$150.00
CAT 824	DOZER	$110.00
CAT 160H	MOTOR GRADER	$82.00
CAT 140G	MOTOR GRADER	$86.00
CAT 14G	MOTOR GRADER	$105.00
CAT 16G	MOTOR GRADER	$135.00
CAT 769C	HAUL TRUCK	$140.00
CAT 815	COMPACTOR	$105.00
CAT 621E	WATER WAGON	$120.00
CAT 621	WATER WAGON	$105.00
CAT 980C	LOADER	$115.00
HITACHI EX700H	EXCAVATER	$185.00
INTERNATIONAL	DUMP TRUCK	$85.00
INTERNATIONAL	WATER TRUCK	$85.00
CAT 430D	BACKHOE	$75.00
Hitachi 450	EXCAVATER	$145.00
John Deere 7520	TRACTOR	$75.00
White	WATER TRUCK	$85.00

2006 Hourly Labor Rates

Operator	$32.00
Laborer	$28.00
Foreman	$45.00
Truck Driver	$31.00
Mechanic	$75.00
Stake Setter	$32.00
Standby	$44.00
Superintendent	$60.00