

September 17, 2010

New Mexico Mining and Minerals Division 1220 South St Francis Drive Santa Fe, NM 87505

Attention: Joe Vinson

## **RE: St Anthony Mine Financial Assurance Cost Estimate**

Dear Mr. Vinson:

As agreed to between United Nuclear Corporation (UNC) and the New Mexico Mining and Minerals Divisions, MWH is submitting on behalf of United Nuclear Corporation (UNC) this cost estimate for closure of the St. Anthony Mine. This cost estimate is intended to meet the requirements under the Mining Act Reclamation Program for establishment of Financial Assurance requirements for this site. The estimate was prepared based on the reclamation components presented in the conceptual *St. Anthony Mine, Site Closeout Plan* (MWH, 2006a) with some modifications and additions as described in this letter. Modifications included in the estimate result from additional information collected subsequent to the submission of the Closeout Plan, including results from the *Materials Characterization Work Plan* (MWH, 2006b), the *Vegetation & Wildlife Evaluations / Revegetation Recommendations* (Cedar Creek Associates, 2006), the *Cultural Resources Survey of 342 Acres for the St. Anthony Mine Reclamation* (Lone Mountain Archaeological Services, 2006), and updated earthwork quantities based on new survey data and modifications recommended by the above mentioned reports.

## CHANGES FROM CLOSEOUT PLAN

While the grading requirements presented in the Closeout Plan were not changed, project earthworks quantities were recalculated to account for an archaeological site identified north of Pile 4, changes in material haulage plans, and new survey data collected for the west shaft area. Revised quantities for grading and haulage locations (table 2.1 from the Closeout Plan) are shown in Table 1. These quantities are based on the revised grading drawings included in Attachment 1. Major changes include the excavation of all material from Shale Piles 1 and 2 and haulage to Pit 2. Material excavated from Pile 3 will be placed over the material from the Shale Piles to form four feet of the recommended six feet of cover material. The remaining material from Pile 3 will be hauled to Pit 1. Both cut and fill volumes for Pile 4 were increased due to the revised grading to avoid the archaeological site. And grading volumes were added for the West Disturbance Area, West Shaft Area and Ore Storage Areas 1 and 2 (located along the access road to the West Shaft Area). These volumes were not included in the Closeout Plan and are based on the new survey data collected since the submission of the Closeout Plan.

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TABLE 1 REGRADE VOLUMES					
Facility	Cut Volume1 (cy)	Fill Volume2 (cy)	Haulage3 (cy)	Haulage Location	
Pile 1 & 2	1,644,000	0	1,644,000	Pit 2	
Pile 3	473,000	66,000	407,000	Pits 1 & 2	
Pile 4	4,186,000	926,000	3,260,000	Pit 1	
Pile 5	186,000	16,000	170,000	Pit 1	
Pile 6	101,000	5,000	96,000	Pit 1	
Pile 7	31,000	5,000	26,000	Pit 1	
Crusher/Stockpile Area	102,000	102,000	0	na	
West Disturbance Area	63,000	0	83,000	Pit 1	
West Shaft Area	3,000	500	2,500	West Shaft Surface	
Ore Storage Areas 1 & 2	2,500	0	2,500	Crusher/Stockpile Area	
West Shaft Access Road	26,000	26,000	0	na	
Notes:					

1. Cut volume is total volume of material to be moved during regrade.

2. Fill volume is amount of cut volume to be consolidated within the final facility footprint.

3. Haulage is the amount of cut volume to be hauled and consolidated at the haulage location.

Based on the revised grading plans, new cover volume quantities were calculated based on two feet of cover material as presented in the Closeout Plan. Revised cover volumes are shown in Table 2. Cover volumes have decreased since no cover will be required over the Shale Pile areas after removal of the material and the use of excavated material from Pile 3 as a portion of the recommended cover over the shale. This will reduce the required amount of additional disturbance area from the Lobo Tract borrow source.

TABLE 2				
COVER MATERIAL VOLUME REQUIREMENTS				
Facility	Volume			
	(су)			
Piles 1 & 2	0			
Pile 3	80,000			
Pile 4	401,000			
Pile 5	32,000			
Pile 6	22,000			
Pile 7	18,000			
Crusher/Stockpile Area	84,000			
West Disturbance Areas	20,000			
Pit 1	145,000			
Pit 2	113,000			
Mine Shaft	20,000			
Ore Storage Areas 1 & 2	6,000			
West Shaft Access Road	21,000			
TOTAL	962,000			

The Closeout Plan does not specifically address how stormwater from reclaimed areas will be managed. A preliminary hydrologic analysis, included in Attachment 2, was prepared to evaluate anticipated hydrologic modeling criteria and determine potential flows that will be designed for during

the detailed reclamation design. Additionally, side slope channels that will likely be required in the detailed design are shown on the attached drawings. Based on the limited availability of riprap material near the site and the high flows that will be designed for, the cost estimate is based on concrete based reinforcement methods including articulated concrete blocks (ACBs) and soil cement. Table 3 presents estimated lengths of armored channels and channel protection measures.

TABLE 3 CHANNEL PROTECTION MEASURES					
Channel	Estimated Length (ft)	Protection			
Myer Gulch	4,870	ACB			
Pile 4 Top Surface	1,500	ACB			
Drainage Channel					
Pile Downchutes	1,950	ACB			
Pile Slope Channels	24,800	Soil Cement			

## COST ESTIMATE

The cost estimate was prepared following the Association for the Advancement of Cost Engineering (AACE) recommended procedures and the available level of detail in the St. Anthony Closeout Plan with the modifications discussed above. The methodology used for this cost estimate is consistent with the requirements of the Financial Assurance Calculations Hand Book, attachment 4 to the *Closeout Plan Guidelines for Existing Mines* (MARB, 1996). The estimate was prepared at a Class 2 level, which includes detailed development of construction equipment fleets and personnel loadings, but is considered to have a Class 4 accuracy (-20% to plus 35%) based on the level of design detail available. A description of the AACE cost estimate classifications is included in Attachment 3.

Details of the estimated construction costs are presented in Attachment 4 and summarized in Table 4. The cost estimate is based on third quarter 2010 equipment and Davis Bacon wage rates for Cibola County, NM. The work schedule was estimated at 10 hour/day, 6 day/week with construction being completed in the 2011 construction season.

TABLE 4 SUMMARY OF ESTIMATED CONSTRUCTION COSTS				
ltem	Amount	Description		
Construction	\$20,233,400	Direct construction costs		
Overtime Adjustment	\$791,300	Adjustment for payment of time and a half to non-exempt		
		employees. 16.67% of labor costs		
Contractor Overhead & Profit	\$3,237,300	16% of direct construction cost		
Contract Bond	\$165,700	Contractor cost for bonding. 0.64% of total project cost		
Contractor Insurance	\$388,300	Contractor cost for insurance. 1.5% of total project cost.		
Detailed Engineering and	\$1,051,200	5% of direct construction costs including overtime labor adjustment.		
Construction Support		This cost is in addition to the costs presented in Attachment 2.		
TOTAL	\$25,867,200			

Based on the cost estimate developed from the 2006 Closeout Plan with the modifications presented in this letter, UNC recommends that the Financial Assurance value for reclamation of the St Anthony Mine be set at \$25,867,200. Upon approval, UNC will put in place financial assurance using one of the available mechanisms under the regulations.

It should be noted that actual costs may differ from this estimate at such time as the Closeout Plan is finalized and/or implemented due to adjustments made in the field.

Sincerely,

NETK

James Thompson Supervising Engineer

- Encl.: Hydrologic Analysis Cost Estimate Cost Estimate Classification System
- Copy to: Roy Blickwedel GE Toby Leeson - MWH