0026

#3216
OK

TECHNICAL MEMORANDUM
Utah Coal Regulatory Program

February 24, 2009

TO: Internal File

THRU: Daron Haddock, Permit Supervisor

FROM: Wayne H. Western, Environmental Scientist III WHW bm SOS

RE: Chapter 8 Update, Inc – Bond Estimate Bear Canyon Mine, C/015/0025,and Project 3216

SUMMARY:

On February 12, 2009, the Division received a request to adjust the reclamation cost estimate. The Permittee requested that the Division apply a site factor to the labor rates. The Division does not apply a site factor to the labor rates. The reason for not applying a site factor is that the factor that most closely represents reclamation costs is the construction site index. For the Utah cities listed in RS Means, the construction site index usually is within 2% of the national average. Therefore, the Division does not use a site labor factor.

TECHNICAL ANALYSIS:

RECLAMATION PLAN

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

Determination of Bond Amount

The Division evaluated the Permittee's request for a bond adjustment and determined that the request could not be granted because R645-301-830.200 requires that the bond be sufficient to assure the completion of the reclamation plan if the work has to be performed by the Division in the event of forfeiture.

In the letter received February 12, 2009, the Permittee requests that the Division adjust labor rates based on region factors. The Permittee stated:

> The Division's own Technical Directive, which was agreed on by the Coal Operators eight years ago, states that the labor costs are derived from the RS Means. RS Means states that these "labor cost should be adjusted accordingly utilizing these indexes."

The Division technical directive are none binding documents that are used as guidelines by the Division and coal operators. The document that discusses reclamation cost estimates is Technical Directive 007. The regional site factors are discuss in Section 3 I:

> The R. S. Means Company, Inc. publications have site factors for five cities in Utah including Price. The only regional factor that applies to reclamation work is site construction. Historically, the site construction regional factor for Utah cities is within 2% of the national average. Since the adjustment is not significant and varies from year to year, the Division does not use the Means regional factors.

Over the past eight years, the coal operators have been aware of the Division's practice to use the site construction index for labor rate adjustments. The Coal Operators' response to the site construction index has been to expand it role in reclamation cost estimates. Specifically the industry requested that the Division use the site index to calculate escalation costs.

The Coal Operators did not want the Division to use the RS Means general construction historical cost index because that index contained several items that were not typically found in reclamation projects and resulted in a higher escalation factor than needed. The Coal Operators requested that the Division use site construction index which the Division has adopted.

In the February 12, 2009 letter, the Permittee stated:

> RS Means states that these "labor costs should be adjusted accordingly" utilizing these indexes.

The full quote from RS Means 2008 Heavy Construction Cost Data and is found on page vi under Labor Costs:

> If wage rates in your area vary from those used in this book, or if rate increase are expected within a given year, labor costs should be adjusted accordingly.

The term in *your area* is vague and left to interpretation of the person doing the estimating. The Division interpreted *your area* to be a geographic region that included a pool of contractors large enough to ensure reclamation during economic condition that are likely to occur over a five year period. The Division considers that area to be the entire state of Utah as well as parts of the surrounding states, which have contractors capable of performing reclamation. The interpretation of *your area* is consistent with past reclamation activities done as part of bond forfeitures when the Division used contractors from out of state or from areas of the state that were over 100 miles from the project.

The Permittee did not state specifically what location factor they used. However, from the labor rates listed one could conclude that the Permittee used the Price factor of 46.8. The location factors were calculated from the City Cost Index. RS Means gives detailed for Logan, Ogden, Provo, and Salt Lake City but not Price.

RS Means discusses City Cost Indexes on pages 490 and 491. How the indexes were developed as discussed under the subheading *What you might like to know about how we developed the indexes.*

> *The information presented in the CCI is organized according to the Construction Specifications Institute (CSI) Material Format 2004.*
>
> *To create a reliable index RS Means researched the building type most oftern constructed in the United States and Canada. Because it was concluded that no one type of building completely represented the building construction industry, nine different types of buildings were combined to create a composite model.*
>
> *The exact material, labor and equipment quantities as based on detailed analysis of these nine building types, then each quanity is weighted in proportion to expected usage. These various material items, labor hours and equipment rental rates are thus combined to form a composite building representing as closely a possible tht actual usage of materials, labor and equipment used in the North American Building Construction Industry.*

The following structures were chosen to make up that composite model:

1. *Factory, 1 story*
2. *Office, 2-4 story*
3. *Store, Retail*
4. *Town Hall, 2-3 story*
5. *High School, 2-3 story*
6. *Hospital, 4-8 story*
7. *Garage, Parking*
8. *Apartment, 1-3 story*
9. *Hotel/motel, 2-3 story*

For the purposes of ensuring the timeliness of the data, the components of the index for the composite model have been streamlined. They currently consist of :

- *Specific quantities of 66 commonly used construction materials.*
- *Specific labor-hours for 21 building construction trades; and*
- *Specific days of equipment rental for 6 types of construction equipment (normally used to install the 66 material items by the 21 trades.)*

The City Cost Indexes were based on construction projects that involved commercial buildings. Reclamation of coal mines are very different from building construction projects. To use a multiplier that weighted with electrician, plumbers, carpenters painters, concrete finishers, bricklayers etc to adjust the wages rates of equipment operators and truck drivers will not result in a number that the Division could use for estimating reclamation costs.

The Division will address the application of City Cost Indexes for each division listed in RS Means and why only the site and infrastructure demolition factor is applicable for reclamation cost estimates.

015433 Contractor Equipment. In the 2008 RS Means publication, the site factors for Utah for installation ranges from 100.2 to 99.0 of the national average. *This factor deals only with equipment costs so the Division should not use this factor for an adjustment to labor rates.*

0241, 31-34 Site & Infrastructure Demolition. In the 2008 RS Means publication the site factors for installation in Utah range from 99.2 to 97.3 of the national average.

The more common line items for items in 0241 include building demolition. The typical crew is B-8 that consists of:

- 1 Labor Foreman (outside)
- 2 Labors
- 2 Equipment Operators (medium)

- 1 Equipment Operator Oiler
- 2 Truck Divers (heavy)

Items listed in 31 involve earthwork. The crews are generally under the B category that usually consists of equipment operators, labors. Such crews are typical of reclamation work.

Items listed in 32 involve operations and maintenance of exterior improvements. Such items include recycling asphalt, bases, ballasts, paving and planting. Planting is done as part of standard mine reclamation. The other items such as recycling asphalt are done on as part of mine reclamation but only on a small scale.

Items listed in 33 involve water utilities, sanitary sewerage utilities and storm drainage utilities. Mine reclamation usually does not involve such items.

Because the type of laborers listed for site and infrastructure demolition is similar to those that are involved in coal mine reclamation, the Division uses that information to evaluate regional adjustment factors. ***Because those factors are usually close to the national average and vary from year to year, the Division uses the national average.***

0310 Concrete Forming & Accessories. In the 2008 RS Means publication the site factors for installation in Utah range from 57.3 to 57.1 of the national average. Crews for those operations appear to usually be C-1 or C-2 that consist of carpenters, laborers and foremen. Reclamation of coal mines usually does not involve the installation of concrete or work that would normally be done by carpenters. *Therefore, this factor is not relevant for the purpose of estimating the reclamation costs for coal mines.*

0320 Concrete Reinforcing. In the 2008 RS Means publication the site factors for installation in Utah range from 72.2 to 72.1 of the national average. Crews for those operations vary but often consist of rodmen. Reclamation of coal mines usually does not involve the installation of reinforced concrete. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

0330 Cast-in-Place Concrete. In the 2008 RS Means publication the site factor for installation in Utah is 72.0. The crews for those operations vary but a typical crew is C-14A which consists of a outside forman, carpenters, rodmen, cement finishers and equipment operator. Most coal mine reclamation operations do not include the use of carpenters, rodmen and cement finishers. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

03 Concrete. See the discussions above for concrete installation labor rates.

04 Masonry. In the 2008 RS Means publication the site factors for installation in Utah 60.1 of the national average. The crews for masonry work usually are D crews which consist mostly of bricklayers. Most coal mine reclamation operations do not include the use of blicklayers. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

05 Metals. In the 2008 RS Means publication the site factors for installation in Utah ranges from 72.6 to 72.5 of the national average. The crews used for metals installation are E crews that consist mostly of steel workers. Most coal mine reclamation operations do not involve the installation of metal structures. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

06 Wood, Plastics & Composites. In the 2008 RS Means publication the site factors for installation in Utah is 54.1of the national average. Most of the crews used for installing those products are carpenters which are usually not involved in coal mine reclamation work. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

07 Thermal & Moisture Protection. In the 2008 RS Means publication the site factors for installation in Utah is 65.8 of the national average. Those crews are not listed in the heavy construction site index. Most coal mine reclamation work does not involve the installation of thermal and moisture protection. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

08 Openings. In the 2008 RS Means publication the site factors for installation in Utah is 55.7 of the national average. Those crews are not listed in the heavy construction site index. Most coal mine reclamation work does not involve the installation of openings such as doors and windows. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

0920 Plaster & Gypsum Board. In the 2008, RS Means publication the site factors for installation in Utah is 52.7 of the national average. Those crews are not listed in the heavy construction site index. Most coal mine reclamation work does not involve the installation of plaster and gypsum board. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

0950, 0980 Ceiling & Acoustic Treatment. In the 2008 RS Means publication, the site factors for installation in Utah is 52.7 of the national average. Those crews are not listed in the heavy construction site index. Most coal mine reclamation work does not involve the installation of ceiling and acoustic treatement. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

0960 Flooring. In the 2008 RS Means publication, the site factors for installation in Utah is 55.1 of the national average. Those crews are not listed in the heavy construction site index. Most coal mine reclamation work does not involve the installation of floors. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

0990 Wall Finishes & Painting/Coating. In the 2008,RS Means publication, the site factors for installation in Utah ranges from 63.3 to 44.9 of the national average. Those crews are not listed in the heavy construction site index. Most coal mine reclamation work does not involve the installation wall finishes, or painting. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

Covers Divisions 10-14, 25, 28, 41, 43, 44. In the 2008 RS Means publication, the site factors for installation in Utah is 64.7 of the national average. Most of those crews are not listed in the heavy construction site index. Most coal mine reclamation work does not involve the covers. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

21, 22, 23 Fire Protection, Plumbing & HVAC. In the 2008 RS Means publication, the site factors for installation in Utah is 67.4 of the national average. Most of those crews listed in contain plumbers, sheet metal workers and stream fitters. Most coal mine reclamation work does not involve the installation of fires protection, plumbing fixtures and heating, ventilation and air conditioners. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

26, 27, 3379 Electrical Communications & Util. In the 2008 RS Means publication, the site factors for installation in Utah ranges from 71.7 to 68.7 of the national average. Most of those crews listed contain electricians. Most coal mine reclamation work does not involve the installation of electrical items. *Therefore, this factor is not relevant for estimating the reclamation costs for coal mines.*

Findings:

The Division cannot make a bond adjustment based on the use of City Cost Index site factors. The only item in the City Cost Index that can be directly applied to reclamation is site and infrastructure demolition. The reason is that types of laborers used in those costs are similar to those used to reclaim abandoned mines. That site factor was within 2% of the national average in 2008 for each Utah city listed specifically in RS Means.

In 2009 the RS Means index for Site and Infrastructure, Demolition in Utah ranged for 101.7 to 100.4. If the Division were to use a site factor then in 2009, rates would be higher than the national average.

RECOMMENDATIONS:

The Division is aware that reclamation bonds have become a major concern for all operators. The Division has always been willing to work with Permittees to review the bonds and adjust them as needed. In addition, the Division encourages the Permittee to apply for Phase I and Phase II bond release for those areas that have been reclaimed.

O:\015025.BCN\FINAL\WG3216\whw3216.doc